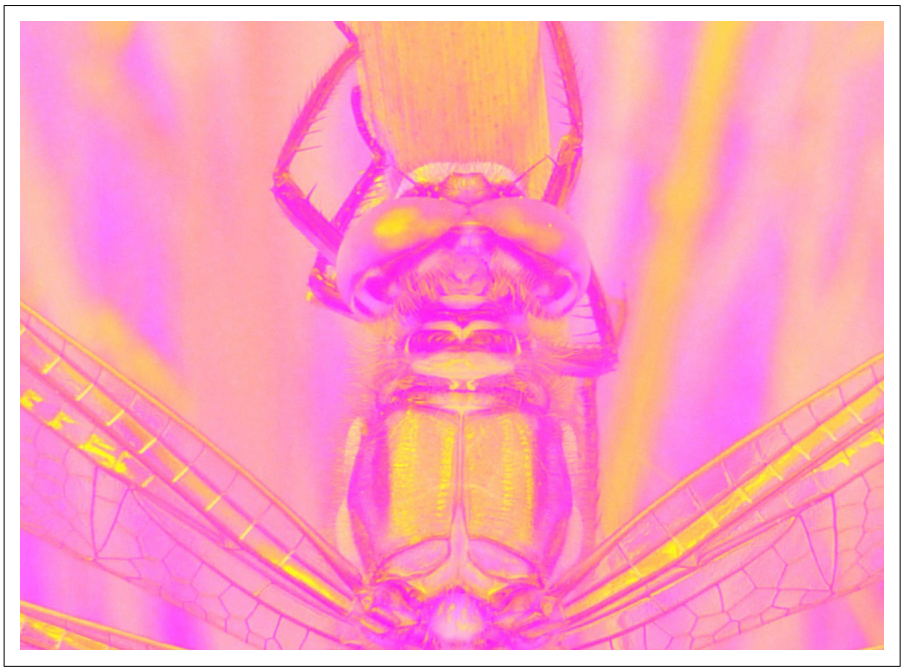
Invertebrate Survey Report
LOHP 2022

Broomscot Common and Scarfe Meadows



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Little Ouse Headwaters Project

December 2022

Contents

1 Summary

- A baseline survey of invertebrates was carried out at the LOHP sites Broomscot Common and Scarfe Meadows, during 12 visits, between April and November 2022. The results of this survey were combined with data from previous visits to the sites by the surveyor and his colleagues.

- 3,147 records were collated, representing 1,423 distinct invertebrate species. Thirteen of these species are designated as Nationally Rare (NR, Red Data Book) and 90 are designated as Nationally Scarce (NS, Notable).

- Nine species qualify with an IUCN Threat status of 'Vulnerable' or 'Near Threatened'. Those in the former category are Small Heath butterfly *Coenonympha pamphilus*, the moths White-line Dart *Euxoa tritici* and Oak Hook-tip *Watsonalla binaria* and the variegated mud-loving beetle *Heterocerus fusculus.* In the latter category are the aquatic beetles *Enochrus nigritus* and *Agabus uliginosus* and the moths Blackneck *Lygephila pastinum,* Small Dotted Footman *Pelosia obtusa* and Latticed Heath *Chiasmia clathrata.* The IUCN 'Vulnerable' beetle *Heterocerus fusculus* is in need of re-evaluation due to overlooked inland populations.

- Two NERC (Natural Environment and Rural Communities Act 2006) Section 41 species were recorded. These are the Small Heath butterfly *Coenonympha pamphilus* and The Five-banded Weevil Fox *Cerceris quinquepunctata.* The NERC legislation requires that 'the presence of these species needs to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity'.

- No **fully** legally-protected species were found during the survey.

- The survey demonstrates the importance of the breck heath habitat at Broomscot Common which supports significant invertebrate assemblages more typical of those sites in the nearby Breckland region.

- Brief recommendations are given for habitat creation and also management of existing habitats, with the aim of potentially enhancing the value of this important habitat mosaic complex for its invertebrate assemblages.

2 Scope of Survey

This survey was commissioned by The Little Ouse Headwaters Project (LOHP), 'a local Charity dedicated to the restoration, conservation and promotion of enjoyment of the wildlife and landscape of the Little Ouse valley on the Suffolk/Norfolk borders'.

The contract remit was to carry out a baseline survey, to identify and report on terrestrial and aquatic invertebrate species across two sites managed by the organisation. LOHP owns Scarfe Meadows but leases Broomscot Common which belongs to the Garboldisham Parish Charity. The sites lie within close proximity of each other in the parish of Garboldisham and form part of a broader fen-habitat restoration scheme. **The present survey is the third in a series of four baseline surveys of all of the current LOHP reserves**. Previous surveys on other sites owned or leased and managed by the Charity, were carried out in 2019 and 2021 (Lane, 2019; 2021).

Results of the survey were used to evaluate the quality of the sites, and to offer recommendations for management that focus on the creation of new habitat and the preservation and maintenance of significant habitat and related insect assemblages.

This report summarises the results of twelve site survey visits between April 12 and November 16, 2022. In addition, the report also includes data from casual survey visits to Broomscot Common on single dates in June, July, August and November 2017, June 2018, July 2019 and October 2021, and to Scarfe Meadows very briefly on single dates in June and August 2017.

3 Introduction

The following Table gives the site code letter and name, and photographs of aspects and habitat types at each site. Also see **Figs. 1** and **2** below.

Table 1 – **Examples of target survey areas** (all photographs taken in 2022)

Site Code	Photograph	Name
A		Scarfe Meadows, south-west meadow facing sse. Species poor, cattle-grazed semi-improved grassland with locally dominant *Deschampsia cespitosa.* In near distance on the left of the photo is ditch D2 which traverses the southern meadows. Sycamores and ash are present.
A		Scarfe Meadows, south-west meadow facing ssw

Site Code	Photograph	Name
A		Scarfe Meadows, north meadow at higher elevation, facing west along the hedge-line that contains bramble *Rubus sp*, ivy *Hedera helix*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and ash *Fraxinus excelsior*.
A		Scarfe Meadows, expansive central area of north meadow characterised by seasonal inundation of *Juncus*-dominated grassland.

Site Code	Photograph	Name
D1		Scarfe Meadows main ditch D1 (facing wnw) aligned west to east and separating the north meadow from the south meadows. Bordered by dense emergent common reed *Phragmites australis.*
D2		Scarfe Meadows, small ditch D2, seasonally inundated, aligned approximately north to south and bisecting the southern west and east meadows.

Site Code	Photograph	Name
D2		Scarfe Meadows detail of wet mud draw down zone of small ditch D2 close to its confluence with the main ditch D1. This small ditch completely dried out in summer 2022.
B		Broomscot Common facing sse at the point where short turf rabbit-grazed grassland opens out into expansive 'breck' grass heath, bordered by gorse scrub on its north and west perimeters.

Site Code	Photograph	Name
B		Broomscot Common, detail of rabbit *Oryctolagus cuniculus* earthworks on the 'heath'. Rabbit activity is important in breaking up the turf structure and creating patches of bare ground that are associated with invertebrate assemblages of high insolation habitats.
B		Broomscot Common, fen area; a linear strip of relatively diverse wetland fen habitat which is cut on rotation and is subject to seasonal inundation. In the background is a line of oaks *Quercus robur* which flank the site on this northern edge. Oaks are also present along the south boundary of the site.

Site Code	Photograph	Name
B		Broomscot Common, detail of the fen in spring, when the ground was saturated. The fen dried out completely in summer 2022.
B		Broomscot Common, fen area showing a fallen partially dead willow *Salix sp,* which is a source of dead wood for saproxylic species.

Site Code	Photograph	Name
B		Broomscot Common. In the north-west corner of the site is a 'triangular area' of wetland with willow carr. Although the area is seasonally inundated, it almost completely dried out in summer 2022. Desmoulin's whorl snail *Vertigo moulinsiana* was once found here (Abrehart, 2013).
B		Broomscot Common. Vegetation heaps produced by the fen cuts, can be found at the base of the oaks at the north edge of the fen. This habitat can be productive for invertebrates, particularly as an overwintering refuge.

Site Code	Photograph	Name
P1		Broomscot Common, dipping pond, containing a diverse fauna and marginal flora.
P2		Broomscot Common, pond in north-east corner of site.

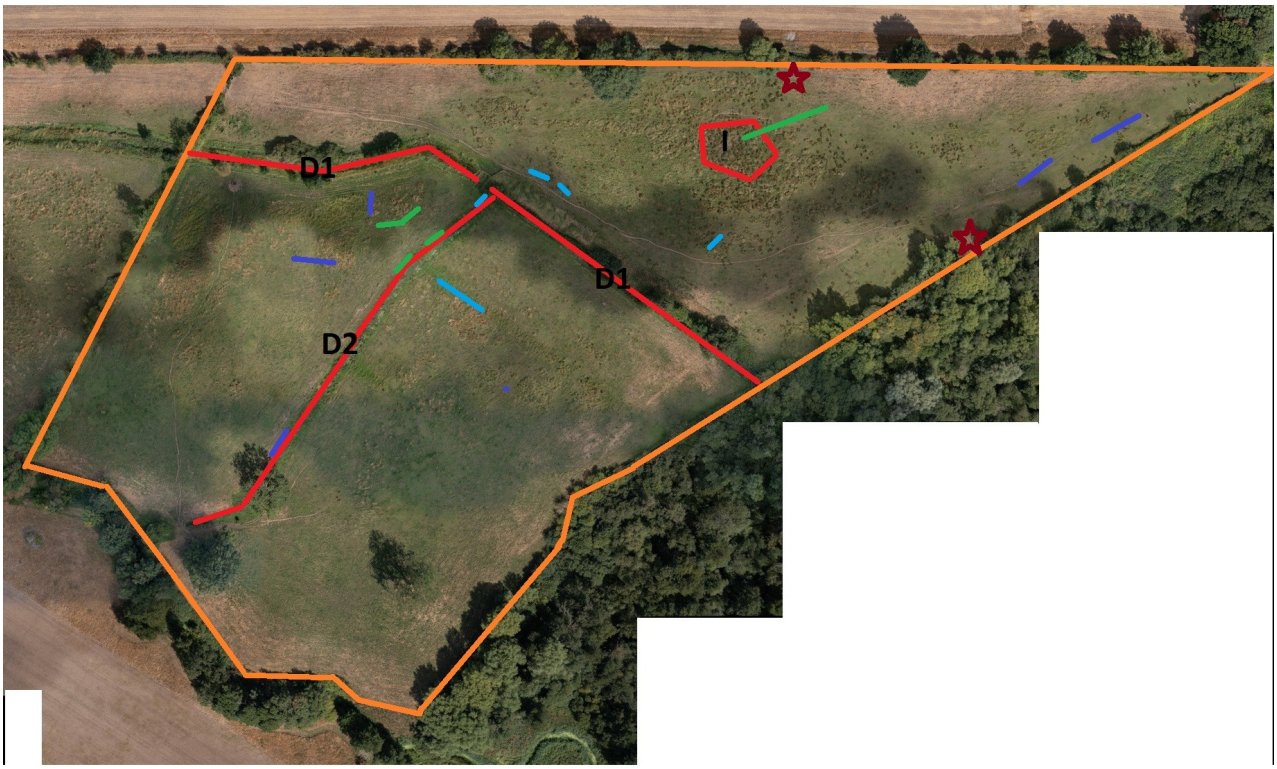

Fig. 1 LOHP Scarfe Meadows, site 'A': site perimeter marked in orange; ditches 'D1', 'D2' and inundation 'I', marked in red and labelled in black; pitfall trap lines – April (purple), June (green) and September (light blue); two moth trap locations in July marked by stars. (Photo: John Lord)

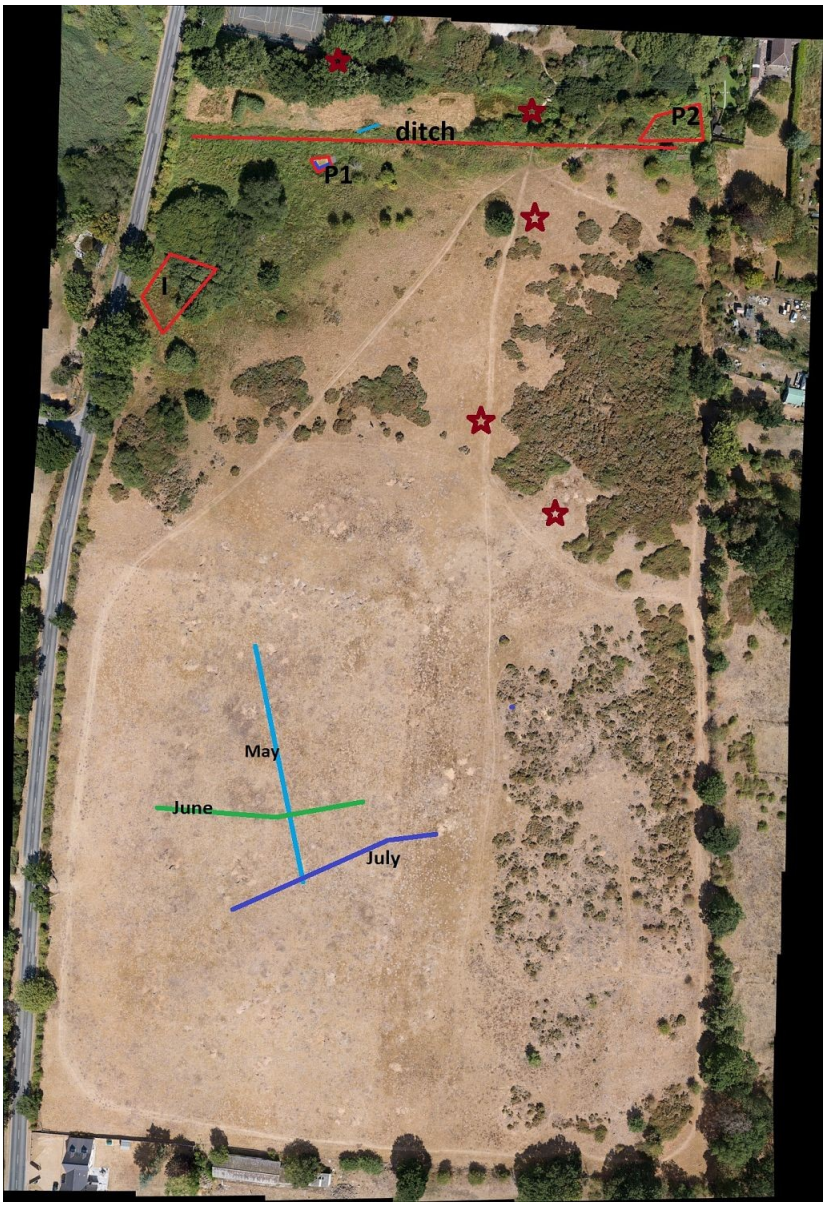

Fig. 2 LOHP Broomscot Common, site 'B': ponds 'P1', 'P2' and ditch marked in red and labelled in black; pitfall trap lines – May (light blue), June (green) and July (purple); five moth trap locations in July marked by stars. (Photo: John Lord)

4 Methodology

4.1 Field Survey

The following insect groups were targeted during the survey:

- Coleoptera (beetles; all families)
- Dermaptera (earwigs)
- Diptera (flies; larger Brachycera, Scathophagidae (part), Sciomyzidae, Syrphidae, Tephritidae and Tipulidae, Limoniidae and allies)
- Hemiptera (true bugs including Auchenorrhyncha and aquatic species, but very few psyllids or aphids)
- Hymenoptera (mainly sawflies, but also some ants, bees and wasps)

- Lepidoptera (butterflies and moths)
- Neuroptera (lacewings and their allies)
- Mecoptera (scorpionflies)
- Odonata (dragonflies and damselflies)
- Orthoptera (bush crickets, ground-hoppers and grasshoppers)
- Plecoptera (stoneflies; adults)
- Trichoptera (caddisflies; adults)

The following non-insect groups were targeted during the survey:

- Araneae (spiders)
- Mollusca (aquatic and terrestrial gastropods only, casually recorded)
- Isopoda (woodlice)

The lead surveyor specialises in British beetles (Coleoptera) and true bugs (Hemiptera) so these groups dominate the resulting samples. The lead surveyor was accompanied on many visits in 2022 by Andy Brown, and with an additional supporting visit by James Symonds. Steve Lane (lead surveyor) surveyed mainly for Coleoptera and Hemiptera and Andy Brown surveyed primarily for Diptera and Hymenoptera. All other groups were recorded by both surveyors. With regard to casual survey, Martin Collier (2019) and Darren Mann (2017) both surveyed for Coleoptera at Broomscot Common prior to the 2022 survey and James Symonds visited and co-ordinated a light-trapping session for moth recording on the evening of July 11 into the morning of July 12, 2022, whence terrestrial invertebrate survey was again carried out during daylight hours until midday, mainly by Steve Lane and Andy Brown.

A variety of field techniques were used in the survey. Sweep-netting was conducted by sweeping vegetation with a large heavy-duty net on a metal frame. Beating employed the use of a collapsible sheet on a frame of wood and plastic, and the use of a pole, to beat branches and dislodge arboreal invertebrates from tree and scrub foliage. Particular attention was paid to any standing dead or dying wood such as old dead boughs as these can support scarce and threatened saproxylic species (i.e. those that require dead wood as a medium in which to develop).

A lightweight butterfly net was used to catch aerial and flower-visiting Diptera and Hymenoptera, and also moths.

Grubbing (searching at ground level) and sieving with a bowl and standard mesh plastic garden sieve, were methods that were regularly employed across the site on most visits. These methods were most useful as a means of sampling invertebrates in decaying vegetation and vegetation heaps (the latter at Broomscot Common) in and close to wetland habitats, fungi, moss and cattle dung (the latter at Scarfe Meadows). Rabbit midden dung at Broomscot Common was sieved to sample the dung fauna on the lichen heath. Natural refugia such as large stones and logs, were lifted and the area beneath them inspected for invertebrates.

Close observation was used as a recording technique. This involved either studying small areas of exposed or sparsely-vegetated ground for invertebrates (Broomscot ‘heath’ area), observing and collecting invertebrates from draw down zone wet mud (Scarfe ‘D2’) and looking closely at vegetation and blossom to find invertebrates resting or feeding (both sites).

Aquatic sampling was carried out using a standard heavy duty fine-mesh water net. This was used both in a sweeping motion through submerged vegetation and also as a skimming device to retrieve floating water beetles from the water surface immediately following their displacement by the use of trampling and puddling activity in shallow water.

Moth-trapping was carried out using a combination of actinic, LED and mercury-vapour light traps. Three 125Watt Mercury-Vapour Robinson traps were operated on short turf rabbit-grazed ‘grass heath’ at Broomscot Common, two (a 5 Watt LED Heath trap and a 125Watt MV Skinner trap) were sited at the same locality in and close to fen, and two 15 Watt Actinic Skinner traps were operated at Scarfe Meadows at the hedgerow/grassland interface. The trapping was carried out on the evening of July 11 through to dawn on July 12, 2022.

Grass tussocks were sampled in April and November. The dense root mats of Tufted Hair-grass *Deschampsia cespitosa* are commonly used as hibernating sites for overwintering arthropods. The tussocks are best sampled by cutting through the root-mat such that the tussock is still preserved intact, and inverting the plant over a sieve and bowl before delivering a series of sharp taps to the base, which dislodge invertebrates from within. These fall through the sieve into the bowl where they can be selectively collected and identified. The plant is returned upright to the ground where it will

usually re-root from its rootstock if there is sufficient moisture. In the south meadows of Scarfe Meadows, *Deschampsia* is locally prolific, whereas it only grows sparsely at Broomscot Common. At the latter site, a few plants were sampled on November 16, and at Scarfe Meadows, tussocks were worked on this date and earlier in the year in April.

Pitfall trapping is a particularly useful sampling methodology in sparsely-vegetated short sward grassland and on draw-down zones at the edges of standing water. The technique utilises plastic beakers sunk into the ground, flush with the ground surface, to passively collect diurnal and nocturnal ground-active species such as ground beetles, rove beetles, ground bugs and ground-active spiders. The beaker holes are dug with a bulb-corer and the beakers dropped neatly into the holes. The beakers are then charged with saturated salt solution or monopropylene glycol (a harmless semi-viscous food additive) and a coarse-mesh gauze is placed over the opening to prevent reptiles, amphibians and small mammals from falling in. The beakers are then left in situ and serviced by emptying the contents after a period of normally between one and four weeks.

Figs. 1 and **2** show the locations of pitfall-trapping during the survey. Targeted areas at Broomscot were the short turf rabbit-grazed lichen heath and the draw down zones at the edges of the dipping pond ('P1') and adjacent ditch. At Scarfe Meadows, pitfall traps were installed at various locations across the meadows, with the aim of sampling the different vegetation assemblages, and trap lines were also placed along the draw-down zone of the north-south aligned ditch ('D2').

Traps were installed during four periods of the year; in spring, from April 18 to April 25 (Scarfe) and April 25 to May 3 (Broomscot), in early summer, from June 9 to June 14 (both sites simultaneously), in mid-summer, from July 12 to July 15 (Broomscot only) and in late summer, from September 5 to September 9 (Scarfe only). The trapping periods vary both in duration and seasonality, between the two sites, due to consideration of drought and temperature on the trap preservative and trap catches, and also due to consideration of the different habitats at both sites with a view to maximising the productivity of the trap catches for the associated invertebrate assemblages there. Twenty-five traps were used at each site in each trapping period.

Photographs were taken of invertebrates and habitats during the survey.

A certain amount of identification was carried out in the field, but where positive identification required the use of microscopic examination and identification literature ('identification keys'), specimens were collected and removed from the site – most specimens were identified this way. The bio-catches from each site were retained as separate samples. Representatives of Nationally Scarce and Nationally Rare species have been retained as vouchers in the surveyor's personal reference collections. These vouchers are accounted for in the **Appendix**.

Table 2 below lists the survey sites visited on each date and the people who surveyed. The weather conditions on each date were generally optimal for invertebrate survey and have not been recorded, but see '**5 Limitations'** section below.

Table 2. Survey dates, sites visited and surveyors

Date	Sites Visited	Personnel
June 30, 2017	Broomscot Common, Scarfe Meadows	SL (Steve Lane), AB (Andy Brown)
July 1, 2017	Broomscot Common	SL, DJM (Darren Mann)
August 21, 2017	Broomscot Common, Scarfe Meadows	SL, AB
November 27, 2017	Broomscot Common	SL, AB
June 27, 2018	Broomscot Common	SL
July 29, 2019	Broomscot Common	SL, AB, MJC (Martin Collier), TH (Tim Hodge)
October 11, 2021	Broomscot Common	SL, AB
April 12, 2022	Scarfe Meadows	SL
April 14, 2022	Broomscot Common, Scarfe Meadows	SL, AB

April 18, 2022	Broomscot Common, Scarfe Meadows	SL, AB
April 25, 2022	Broomscot Common, Scarfe Meadows	SL
May 3, 2022	Broomscot Common	SL
June 9, 2022	Broomscot Common, Scarfe Meadows	SL, AB
June 14, 2022	Broomscot Common, Scarfe Meadows	SL
July 11-12, 2022	Broomscot Common, Scarfe Meadows	SL, AB, JS (James Symonds), RL (Rowena Langston)
July 15, 2022	Broomscot Common	SL
September 5, 2022	Broomscot Common, Scarfe Meadows	SL, AB
September 9, 2022	Scarfe Meadows	SL
November 16, 2022	Broomscot Common, Scarfe Meadows	SL

The result of any site survey depends both on the amount of effort put into recording at that location and the inherent ecological status of the site which is influenced by its size, geographical location, surrounding landscape and habitat biodiversity. For comparison within and between sites to be most accurate, all locations within a site would have to be surveyed with the same measured effort, using standardised sampling techniques. The preferred methodology adopted for the LOHP baseline surveys is for the surveyors to intuitively spend more time on areas that are obviously more diverse and that have the potential to support rare species or assemblages. An ‘exhaustive approach’ is taken, meaning that sampling is only stopped in a ‘productive’ area when new species more-or-less cease to be recorded there. By using these criteria, there is a greater likelihood of finding at least some of the scarcer species on the site, and often many more. A standardised methodology can miss these scarce species and produce a generalised list of nothing but common species.

5 Limitations

Natural England published guidelines for conducting invertebrate surveys (Drake *et. al.,* 2007) in which they suggest that 'a reasonably thorough survey of a terrestrial habitat can be made through seven visits at monthly intervals between April and October', but that 'four or five visits over this period will capture most species'. The timing and frequency of the 2022 survey visits of the LOHP sites were ideal for sampling terrestrial species (as well as aquatic species) through all seasons as they have provided visits during the months of April, May, June, July, September and November, and by at least two surveyors on five of the twelve visits in that year.

In recent years, the abundance and diversity of Diptera (and possibly also aculeate Hymenoptera) have been noticeably poor in southern and eastern England (surveyor’s experience and Steve Falk *pers comm*, 2019.). There is no specific research known to the surveyor that fully explains the causative factors behind this phenomenon although it may be associated with climate change, particularly with extreme daytime temperatures and also perhaps a direct impact from pesticide use in agriculture. It has been observed recently that there have been huge geographical population shifts in, for example, hoverfly species, due presumably to climate change. *Rhingia campestris* an otherwise common hoverfly around pasture in East Anglia has practically disappeared from this and other England regions in the last few years. Roger Morris, the National recorder for hoverflies notes (*pers* comm) that the population of this hoverfly, along with others, has shifted geographically from southern to northern England and Scotland in a relatively short time frame.

The drought conditions experienced in summer 2022 along with persistently high temperatures caused the short sward habitats at the survey sites to 'burn out' resulting in a dearth of invertebrates at ground level. The lead surveyor is familiar with this phenomenon and has in Cambridgeshire for example, noticed that some normally ground-dwelling invertebrates on arable margins during periods of drought, were to be found in abnormal (for them) arboreal situations, possibly seeking micro-climates of increased humidity and reduced temperature. Regardless of this speculative reasoning, the probable migration of species out of habitat rendered uninhabitable due to the 2022 drought, made recording at the Broomscot Common 'heath' in particular, very difficult. Likewise, some of the aquatic sampling planned for summer at both sites had to be abandoned due to drying out of ditches and pools.

Figs 1 and **2** illustrate the condition of the grassland habitat and show, at Scarfe Meadows how the grassland had effectively died and browned prematurely along the northern edge of the north meadow and the south edge of the south meadows. At Broomscot, the burn-out was particularly noticeable on the breck heath area which appears a very pale brown in the photo taken by John Lord in August 2022. The habitat conditions in the two Lord photos contrast dramatically with those shown in the majority of photos in Table 1 which were taken in April 2022, before the drought.

If 2022 is a remarkable and atypical year for extreme high temperatures coupled with a prolonged rainfall deficit, it would be hoped that the invertebrate fauna at the LOHP sites will be resilient and largely unaffected, or that populations will at least recover from any short-term negative effects on their dynamics. If, however, the conditions in 2022 are set to become the new norm, then we enter uncharted territory regards the long-term trends in invertebrate population dynamics in the region and beyond.

6 Results and Interpretation

A total of 3,147 records were amassed from the 2022 survey and this surveyor's collated previous data for Broomscot Common and Scarfe Meadows. Altogether, these records represent 1,423 invertebrate species (not including aggregates of species and indeterminate species), most of which were recorded during the 2022 survey. This total includes 658 Coleoptera (beetles), 263 Lepidoptera (including 19 butterflies), 172 Hemiptera (true bugs), 124 Diptera (flies) and 68 Araneae (spiders). A full species list is given in the Table in the **Appendix** of this report.

No species that are afforded full protection under UK or International legislation were recorded during the survey. However, Small Heath butterfly *Coenonympha pamphilius*, recently designated as IUCN Vulnerable and also an NERC s.41 species (but the latter designation possibly only in the context of 'research only'?), was recorded at Broomscot Common and the s.41 Five-banded Weevil Fox *Cerceris quinquefasciata* was also recorded there. The NERC Act legislation requires that the presence of section 41 'species of principal importance' at a locality, needs to be taken into consideration by a public body (e.g. the planning 'authority') when performing any of its functions (e.g. determining the impact of planning applications) with a view to conserving biodiversity.

6.1 Conservation Status

6.1.1 Nationally Rare and Nationally Scarce Species

Invertebrate surveys conducted between the late 1980s and 2010 relied in their interpretation of species recorded, on information in published Red Data Books and lists of scarce and threatened species, which created British-specific rarity statuses for individual taxa, based on restricted distribution rather than population threat or extinction risk. At the time, the term 'Nationally Scarce', originally coined for plants, was applied to invertebrate species that were known to occur in 16 to 100 10km squares (hectads) of the National Ordnance Survey grid.

Early assessments of invertebrate taxa used the term 'Nationally Notable' for these Nationally Scarce species and, for some taxa, this category was further split into 'Notable A' (Na) for species occurring in 16 to 30 hectads of the National Grid and 'Notable B' (Nb) for those occurring in 31 to 100 hectads. A further category used was 'Red Data Book' which equates to 'Nationally Rare'. This category was used for species that occurred in 15 or fewer hectads in Britain. It was further subdivided depending on the perceived or actual degree of rarity, e.g. 'RDB3' as Rare, 'RDB2' as Vulnerable, 'RDB1' as Endangered, 'RDBI' as 'Red Data Book Indeterminate' and 'RDBK' as 'Red Data Book Insufficiently Known'.

Recently, since 2010, **IUCN Reviews** have been produced for many invertebrate groups and these are continuing to be written. These Reviews deal primarily with **threat** status, but they also re-evaluate existing British Rarity (restricted distribution) statuses to bring them up-to-date. In the recent IUCN Reviews, the restricted distribution categories have now been standardised to 'Nationally Rare' (NR) and 'Nationally Scarce' (NS) without further subdivision.

Thus, the British system of assessing rarity based solely on distribution is used alongside IUCN criteria which, although they also use measures of geographical extent, are primarily concerned with assessing National and International Threat in terms of decline of species populations.

In this report, for the taxa found at the site, I have used the newly-adopted British Rarity categories 'NS' (Nationally Scarce) and 'NR' (Nationally Rare) where these appear in IUCN Reviews. Otherwise, where no such IUCN reviews yet exist for the species recorded, I have resorted to the older categorisations of Nationally Scarce 'Notable A', 'Notable B' and 'Notable' and for Red Data Book species, the older 'RDB' categories. The situation is currently complex, but it will eventually become more simple as further invertebrate groups are assessed for IUCN Reviews and the terminology becomes standardised.

A total of 13 Nationally Rare (NR) species were recorded during and prior to the survey along with 90 species of Nationally Scarce (NS) status. The Nationally Rare and Scarce species are listed in Table 3 below.

6.1.2 IUCN Nationally Threatened Species

The main categories in the IUCN Reviews which deal with Threat status are, in order of increasing threat status; 'Least Concern (LC)', 'Near Threatened (NT)', 'Data Deficient (DD)' 'Vulnerable (VU)', 'Endangered (EN)', 'Critically Endangered (CR)' and 'Regionally Extinct (RE)'. Analysis for each species is based on the area that it occupies and/or population statistics with an emphasis on trends of decline and the magnitude of such trends.

From the 2022 LOHP survey, **nine species are identified as having IUCN Threat designation of 'Near Threatened' or, 'Vulnerable' status. In addition, two species are NERC s.41 Species 'of principal conservation importance'.** The IUCN Threat status and NERC species are listed in Table 3 below. Designation in the IUCN 'Near Threatened' category indicates that after all available data has been evaluated for a species, it currently fails to qualify as threatened (with extinction), but only narrowly so. Were the British populations to deteriorate further in future years, the species may qualify as being for example 'Vulnerable' or even 'Endangered'.

Table 2 below lists the 108 species with conservation status recorded during and prior to the 2022 survey.

The common or 'vernacular' names have been taken from a number of different literature and internet sources, as well as from 'MapMate'.

Site Code Key:
'A' = Scarfe Meadows
'B' = Broomscot Common

Months - number refers to number of month e.g. '5' = May, '11' = November

Habitat Codes indicating the following species assemblages:
'a' = aquatic
'a/w' = where a species exists at different life stages in both truly aquatic and terrestrial wetland habitats (e.g. dragonflies)
'g' = grassland generally
'h' = breck heath and short turf grassland species (habitat characterised by sparsely-vegetated short sward high insolation grassland or lichen heath)
's' = hedgerow and scrub habitat, including isolated dead wood
'w' = wetland (terrestrial habitat)

The 'Association' column lists main plant associations where these are known and are few, and also fungi where these are reliable associations for that species.

Conservation 'Status' column key; 'NR' = Nationally Rare species, 'NS', Nationally Scarce and the IUCN statuses are 'NT' – Near Threatened and 'VU' – Vulnerable. 'LC' = Least Concern under IUCN evaluation. For definitions of British Rarity codes, see section 6.1.1 or for further interpretation of IUCN evaluation see *e.g.* Lane (2019)

Table 2 The 108 taxa recorded at LOHP Scarfe Meadows and Broomscot Common that have British Rarity status of Nationally Scarce ('Notable' or 'NS') or Nationally Rare ('Red Data Book' or 'NR') designation and/or IUCN Threat Status (including Near Threatened). Square brackets indicates a taxon in need of status re-evaluation due to recent range expansion or which was formerly under-recorded.

Family	Taxon	Vernacular	Site	Months	Habitat Code	Association	Status
Araneidae – orbweb spiders	Hypsosinga albovittata		B	5	h		NS/LC
Gnaphosidae – ground spiders	Zelotes electus		B	56	h		NS/LC
Lycosidae wolf spiders	Pardosa tenuipes		A	46	w		NS/LC
Salticidae – jumping spiders	Marpissa muscosa		A	469,10	s (gate)		NS/LC
Anthribidae – fungus weevils	Platystomos albinus		A	6	s	fungus-infected trees	NS/-
Apionidae – seed weevils	Melanapion minimum	Sallow Guest Weevil	A	6	w	willows	NR/-
Cantharidae – soldier beetles	Cantharis fusca		A	6	w		NS/LC
Cantharidae	Rhagonycha lutea		A	6	s		NS/LC
Carabidae – ground beetles	Amara lucida		B	567	h		NS/LC
Carabidae	Amara montivaga		B	6	h		NS/LC
Carabidae	Harpalus anxius		B	567	h		NS/LC
Carabidae	Harpalus smaragdinus		B	6	h		NS/LC
Carabidae	Oodes helopioides		A	46	w		NS/LC
Carabidae	Pterostichus gracilis		A	46	w		NS/LC
Carabidae	Stenolophus skrimshiranus		AB	46	w		NS/LC
Carabidae	Stenolophus teutonus		AB	6,11	w		[NS/LC]
Carabidae	Syntomus truncatellus		A	6,11	g		NS/LC
Chrysomelidae – leaf beetles	Cassida prasina		B	47	g	yarrow	NS/LC
Coccinellidae – ladybirds	Hippodamia variegata	Adonis Ladybird	B	7	h		[NS/-]
Coccinellidae	Nephus quadrimaculatus	Four-spotted Nephus	B	10	s	ivy	[NR/-]
Corylophidae – minute hooded beetles	Orthoperus nigrescens		B	6	s	dead wood	[NS/-]
Cryptophagidae – silken fungus beetles	Atomaria scutellaris		A	4	h		[NR/-]
Curculionidae –	Acalyptus carpini		AB	47	w	willows	NS/-

Family	Taxon	Vernacular	Site	Months	Habitat Code	Association	Status
weevils							
Curculionidae	Brachypera dauci		B	5	h	common stork's-bill	NS/-
Curculionidae	Coeliodes ruber		B	4	s	oak	NS/-
Curculionidae	Coeliodes transversealbofasciatus		B	4	s	oak	NS/-
Curculionidae	Glocianus pilosellus		B	5	h	'lesser dandelion'	NR/-
Curculionidae	Gymnetron rostellum		A	4	g/h	speedwells?	NS/-
Curculionidae	Magdalis cerasi		B	6	s	hawthorn and other Rosaceae	[NS/-]
Curculionidae	Rhinocyllus conicus		B	6	g	thistles	[NS/-]
Curculionidae	Sibinia primita		B	5	h	*Sagina sp*	[NS/-]
Curculionidae	Tychius pusillus		B	7	g	*Trifolium dubium*	NS/-
Dermestidae – hide beetles etc	Dermestes murinus		B	5		carrion	NS/LC
Dytiscidae – diving beetles	Agabus uliginosus		B	4	a		NS/NT
Erirhinidae – wetland weevils	Grypus equiseti	Horsetail Weevil	A	4		horsetails	[NS/-]
Erirhinidae	Notaris scirpi		A	6	w	sedges, club-rushes, bulrush	[NS/-]
Helophoridae – water scavenger beetles	Helophorus strigifrons		B	4	a		NS/LC
Heteroceridae – variegated mud-loving beetles	Heterocerus fusculus		A	4	w		[NR/ VU]
Histeridae – clown beetles	Saprinus aeneus	Bronze Mirror Clown	B	58	h	carrion and dung	NS/LC
Histeridae	Saprinus planiusculus	Coastal Clown	B	5	h	carrion	NS/LC
Hydrophilidae – water scavenger beetles	Cercyon granarius		AB	4569,11	w		NS/LC
Hydrophilidae	Enochrus nigritus		A	47	a		NS/NT
Hydrophilidae	Enochrus quadripunctatus		AB	7	a		NS/LC
Melandryidae – false darkling beetles	Abdera biflexuosa		B	67	s	dead wood, usually off oak boughs	NS/LC
Melyridae – soft-winged flower beetles	Anthocomus fasciatus		B	4			NS/LC
Mordellidae – tumbling flower beetles	Mordellistena variegata		B	67	s		NS/LC
Nitidulidae – sap	Thalycra fervida		A			sap runs and	NS/-

Family	Taxon	Vernacular	Site	Months	Habitat Code	Association	Status
beetles						decaying organic matter	
Orsodacnidae – orsodacnid leaf beetles	Orsodacne cerasi		A	6	s		NS/LC
Phalacridae – shining flower beetles	Olibrus millefolii		B	7	h	yarrow	NS/LC
Phalacridae	Olibrus pygmaeus		B	7	h	common cudweed	NS/LC
Ptinidae – wood-boring beetles	Hadrobregmus denticollis		A	6	s	dead wood	NS/LC
Salpingidae – narrow-waisted bark beetles	Lissodema denticollis		B	6	s	dead wood	NS/LC
Scarabaeidae – dung beetles	Bodiloides ictericus		B	6	h	dung	NS/LC
Scarabaeidae	Chilothorax distinctus		B	5	h	dung	NS/LC
Scirtidae – marsh beetles	Elodes elongatus		B	6	a/w		NS/LC
Scraptiidae – false flower beetles	Anaspis thoracica		B	7	s	dead wood	NS/LC
Sphindidae – cryptic slime-mould beetles	Sphindus dubius		B	7	s	slime moulds	NS/-
Staphylinidae – rove beetles	Alaobia scapularis		B	6			NS/-
Staphylinidae	Aleochara brevipennis		A	469	g		NS/-
Staphylinidae	Aleochara verna		B	5		dung	[NR/-]
Staphylinidae	Amarochara forticornis		A	11	w?		NR/-
Staphylinidae	Atheta basicornis		A	6	w		NS/-
Staphylinidae	Bledius dissimilis		A	7	w		NS/LC
Staphylinidae	Carpelimus lindrothi		A	9	w		NS/LC
Staphylinidae	Cypha discoidea		A	4	w		NS/-
Staphylinidae	Dochmonota clancula		B	4	w		NS/-
Staphylinidae	Lathrobium fovulum		B	11	w		NS/LC
Staphylinidae	Omalium oxyacanthae		B	5		decaying organic matter	NS/LC
Staphylinidae	Oxypoda lurida		B	5	h		NS/-
Staphylinidae	Oxytelus piceus		A	7	h	dung	NS/LC
Staphylinidae	Stenus butrintensis		A	46	w		NS/-
Staphylinidae	Tachinus flavolimbatus		AB	4,10		decaying vegetation heaps mainly	NS/LC
Throscidae – throscid beetles	Aulonothroscus brevicollis		A	6	s		[NR/-]

Family	Taxon	Vernacular	Site	Months	Habitat Code	Association	Status
Forficulidae – earwigs	Apterygida media	Short-winged Earwig	A	8			NS/LC
Dolichopodidae – long-legged flies	Hercostomus plagiatus		B	7	w		NS/LC
Opomyzidae – opomyzid flies	Opomyza punctata		A	9			NS/-
Stratiomyidae – soldier flies	Odontomyia argentata	Silver Colonel	A	4	w		NS/LC
Tabanidae – horse flies	Tabanus maculicornis	Narrow-winged Horsefly	A	6	w		NS/LC
Cicadellidae – leafhoppers	Ophiola decumana		B	6	h		NS/-
Cicadellidae	Tremulicerus fulgidus		B	7		poplars	NS/-
Coreidae – leatherbugs	Arenocoris falleni	Fallen's Leatherbug	B	67	h	common stork's-bill	NS/LC
Coreidae	Spathocera dalmanii	Dalman's Leatherbug	B	6	h	sheep's sorrel	NS/LC
Delphacidae – planthoppers	Megamelodes lequesnei		B	10	w		NS/-
Delphacidae	Stenocranus fuscovittatus		A	4	w	sedges and grasses	NS/-
Lygaeidae – groundbugs	Megalonotus antennatus		A	6	g		NS/-
Lygaeidae	Megalonotus praetextatus		B	7	h		NS/-
Lygaeidae	Megalonotus sabulicola		B	7,10	h		NS/-
Lygaeidae	Nysius graminicola		B	9	h		[NR/-]
Miridae – plant bugs	Capsus wagneri		A	6	w		NS/-
Rhopalidae – rhopalid bugs	Rhopalus parumpunctatus		B	7	g		NS/LC
Scutelleridae – tortoise bugs	Odontoscelis lineola	Lesser-streaked Shieldbug	B	56	h	common stork's-bill	NS/LC
Chrysididae – ruby-tailed wasps	Hedychrum niemelai		B	7	h		[NR/-]
Crabronidae – digger wasps	Cerceris quinquefasciata	Five-banded Weevil Fox	B	7	h		NR/-
Formicidae – ants	Lasius brunneus	Brown Tree Ant	AB	46	s		NS/-
Melittidae – melittid bees	Dasypoda hirtipes	Pantaloon Bee	B	7	h		NS/-
Crambidae – grass moths	Anania verbascalis	Golden Pearl	B	7	h	wood sage	NS/-
Crambidae	Evergestis limbata	Dark Bordered Pearl	A	7		garlic mustard, hedge mustard	NS/-
Crambidae	Pediasia contaminella	Waste Grass-veneer	B	7	h	grasses including sheep's fescue	NS/-
Drepanidae – hook-tip moths	Watsonalla binaria	Oak Hook-tip	B	7	s	oak	none/VU

Family	Taxon	Vernacular	Site	Months	Habitat Code	Association	Status
Erebidae	Lygephila pastinum	Blackneck	B	7	w	tufted vetch	none/NT
Erebidae	Pelosia obtusa	Small Dotted Footman	A	7	w	?algaes on reeds	NR/NT
Ethmiidae – Ethmiid Moths	Ethmia quadrillella	Comfrey Ermel	A	7		comfrey, green alkanet	NS/-
Gelechiidae – gelechiid moths	Oxypteryx wilkella	Painted Neb	B	7	h	mosses	NS/-
Geometridae – geometer moths	Chiasmia clathrata	Latticed Heath	AB	67	g	Fabaceae	none/NT
Noctuidae – noctuid moths	Euxoa tritici	White-line Dart	AB	7	h		none/VU
Nymphalidae – brush-footed butterflies	Coenonympha pamphilus	Small Heath	B	9	g	Poaceae	none/VU
Pyralidae – pyralid moths	Pempelia genistella	Gorse Knot-horn	B	7	h	gorse	NS/-
Nemouridae – nemourid stoneflies	Nemoura dubitans		AB	4	a/w		NR/LC

6.2 The Species Accounts

Individual accounts are provided below for each Nationally Scarce, Nationally Rare and IUCN Threatened and Near Threatened species recorded during and prior to the 2022 survey.

Wetland Aquatic/Semi-aquatic Species

Agabus uliginosus – a diving beetle
Status: Nationally Rare (NR), IUCN Near Threatened
This convex brownish diving beetle with pale thoracic margins is associated with highly temporary waters on still ground such as those in fluctuating marshes and fens. It is found more-or-less throughout Britain although absent from the central midlands, the extreme south-east and south-west of England and large parts of Wales and Scotland. The majority of records are from eastern England, from East Anglia up into Yorkshire. Adults can be found in all months of the year. In Norfolk, it is relatively frequently recorded. On the 2022 survey, a female of the matt variety was netted from the willow carr inundation in the north-west section of Broomscot Common on April 18.

Cercyon granarius – a water scavenger beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small rotund and convex black species is associated with floating vegetation in fens, but also occasionally in other aquatic habitats. Adults have been recorded in most months of the year. The species is widespread but highly localised with scattered records across southern and midland England and Wales. On the 2022 survey, this species was well represented, with 10 recovered from pitfall traps on the east side of the north pasture at Scarfe Meadows on April 25 along with one in the trap series in the south-west pasture and another three from the 'Ditch 2' trap lines, and on June 14, three were present in pitfalls from the north pasture inundation area. Finally, an individual was sieved from a *Deschampsia cespitosa* tussock in the south-west meadow on November 16. At Broomscot Common, one was 'grubbed' from the fen area on September 5 and eight specimens were present in pitfall traps set along the fen edge ditch line on May 3.

Enochrus nigritus – a water scavenger beetle
Status: Nationally Scarce (NS), IUCN Near Threatened

This is a small brownish water beetle with a very narrow dark longitudinal stripe along the elytral suture. It occurs in mesotrophic and base-rich fens in lowlands. An egg-case is produced, sometimes under water, and larval development may last between one and two months. Adults feed on algae and decaying plants whereas the larvae are predators. Adults are found throughout the year but are most numerous in April, July and September. *E. nigritus* has been recorded since 1980 from Hampshire, Sussex, Berkshire, Oxfordshire, Suffolk, Norfolk, Cambridgeshire, Huntingdonshire, Herefordshire, Anglesey and Cheshire. The species is particularly well-represented in East Anglian fens. On the 2022 survey, a male was netted from 'ditch 1' on April 14, and a specimen was found at a light trap on July 12, both records from Scarfe Meadows.

Enochrus quadripunctatus – a water scavenger beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a slightly larger species than the last, but identical in form. It has a characteristic dark patterning on the thorax consisting of a large central dark area with four small satellite spots. The beetle occurs in lowland, base-rich stagnant water with some exposed mineral substrate and also in mesotrophic fens. An egg-case is produced, sometimes under water, and larval development may last between one and two months. Adults feed on algae and decaying plants whereas the larvae are predators. This species has expanded its range recently. It is found mainly in eastern Britain, in most counties from East Sussex northwards to two sites in Scotland, with most records centred around London and East Anglia. It is also found in Wales. On the 2022 survey one flew to a light trap at Broomscot Common on July 11 and another was found at the Scarfe Meadows light traps the following morning.

Helophorus strigifrons – a water scavenger beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small helophorid beetle is most often associated with fluctuating water levels and inundations, where there is plenty of sedge and rush litter. Adults feed on decaying organic plant matter whereas the larvae are predatory. The adults can be found throughout the year but are most numerous in April and September. The species is widely distributed throughout Britain. On the 2022 survey, three adults were recorded at Broomscot Common on April 18.

Nemoura dubitans – a stonefly
Status: Nationally Rare (NR), IUCN Least Concern
This species develops in seepages flowing through well-vegetated wetland habitat. Macadam (2015) upgraded the species' British Rarity status from Nationally Scarce to Nationally Rare on the basis of there being only fourteen modern records, although NBN appears to show more than this and the lead surveyor is familiar with the species from a number of sites. It is distributed very locally in England and has also been recorded from Wales and Scotland. On the 2022 survey, two adult females were swept at Scarfe Meadows on April 14 and a single female was swept at Broomscot Common on April 18.

Wetland Terrestrial Species

Acalyptus carpini – a weevil
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This small grey weevil is a phytophage on *Salix* and is associated almost exclusively with fen sites across East Anglia, its main area of distribution. It has also been recorded elsewhere in southern England (e.g. south coast, south and east midlands) and Wales, but it is scarce in these regions. Adults overwinter and have been recorded in most months of the year. On the 2022 survey, adults were beaten off willows at Scarfe Meadows on April 12 and July 11, and at Broomscot Common, the species was recorded on July 29, 2019.

Atheta basicornis – an aleocharine rove beetle
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This diminutive wetland species is recorded from marshes, carr and wet woodland, particularly where willows are present. It has specifically been recorded in vegetation litter and under bark and in dead wood where it may be associated with fungi. There is also a record from a swan's nest. Adults have been found between March and December. The beetle is widespread but very locally distributed in England and Wales. In Norfolk it is scarce and there are few records. On the 2022 survey, a female was recorded at Scarfe Meadows on June 9.

Bledius dissimilis – a rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern

This small rove beetle is characteristic of water edge habitats including gravel pits and riverbanks and is also found at seepages on clay cliffs. Adults burrow into wet sand and clay and in common with other species in the genus, they probably feed on algae and detritus. The species has been recorded between April and October with many records of beetles attracted to moth light traps. Its distribution extends from south-east England into central and north-east regions. On the 2022 survey, a male was found at the Scarfe Meadow moth traps on the morning of July 12.

Cantharis fusca – a soldier beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a large, characteristically-patterned grey-blue and red soldier beetle that is found in wet or damp grassland sites such as lowland meadows, marshy grassland and rich fen. It is also found in the upper zone of salt-marshes. Adults are active during May and June. The beetle has expanded its known range significantly over the last two decades and is now very much more widely distributed than it was in the 1980s and 90s. It is currently found in England, Wales and Scotland with the majority of records south of an imaginary line drawn from The Wash on the east coast to The Severn estuary on the west coast. In Norfolk, it is known from Stoke Ferry, and from Cley (where first recorded in the region in 2014), Salthouse Marsh and Adcock's Common SSSI. On the LOHP 2022 survey, five beetles were recorded on June 9 at Scarfe Meadows. Of these, one was beaten off willows next to the entrance information panels and two were beaten off the old hawthorn tree at the south end of 'Ditch 2'.

Capsus wagneri – a capsid or plant bug
Status: Nationally Scarce (Notable B), IUCN not yet evaluated
This is a small black bug with a rounded outline and slightly enlarged antennal segments. It is best identified by dissection of the male genitalia. The species is known from high quality fen sites in Somerset, Cambridgeshire, Norfolk, Northamptonshire, Gloucestershire, Huntingdonshire, Lincolnshire, Yorkshire and Sussex. This is a wetland species associated with various grasses including *Calamagrostis sp* and also *Phalaris arundinacea* (Reed Canary Grass). All sites from which it has been recorded are long-established wetlands. Adults are mostly recorded in the second half of June and in July. There is one generation a year, with the overwintering stage presumably an egg. On the 2022 survey, a male was swept at Scarfe Meadows on June 14.

Carpelimus lindrothi – a rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This relatively recent addition to the British fauna was first recorded in Britain, from Norfolk in 1976. It has since colonised East Anglia and the Midlands regions into southern England, where it is found on mud in damp or marshy habitats, particularly those where draw-down zone is an annual seasonal occurrence. Adults have been recorded in most months of the year. On the 2022 survey, two were found crawling on mud on drawdown at 'Ditch 2' at Scarfe Meadows on September 5.

Cypha discoidea – an aleocharine rove beetle
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated.
This minute rove beetle is typical of wetland habitats such as fens and marshes, where it is perhaps most commonly encountered by sieving wet reed and sedge 'litter' or wet decaying heaps of cut vegetation. Adults are found in most months of the year and it is distributed locally in England and has also been recorded in Wales. On the 2022 survey, an individual was sieved from vegetation litter at the edge of 'Ditch 1' at Scarfe Meadows on April 12.

Dochmonota clancula – an aleocharine rove beetle
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This minute black rove beetle is sometimes present in numbers in wet litter and vegetation debris at the margins of pools, pingos and other inundations. It has a widespread distribution throughout England and has possibly also been found in Scotland. On the 2022 survey, a singleton was recorded in wetland habitat at Broomscot Common on April 18.

Elodes elongatus – a marsh beetle
Status: Nationally Scarce (NS), IUCN Least Concern
The adults of this wetland species are mainly recorded between May and July when they can be beaten off tree and shrub foliage overhanging or close to water courses. The larvae which have not yet been described, are almost certainly aquatic and probably develop over at least a two year duration whereas the adults, by comparison are very short-lived. The beetle is widespread but locally distributed in suitable habitat throughout Britain. On the 2022 survey, four males were beaten off oaks next to the fen area at Broomscot Common on June 9.

Hercostomus plagiatus – a long-legged fly
Status: Nationally Scarce (NS), IUCN Least Concern
This is a fly of wetland habitats including fens, wet woodland and coastal cliff seepages. Little is known of its ecology, but the larvae are possibly semi-aquatic predators. Adults are found between May and August. The distribution of the species is highly localised but widespread, extending from south England into East Anglia, Wales, and as far north as Yorkshire. On the 2022 survey, a male was found in pitfall traps around the dipping pond ('P1') at Broomscot Common on July 15.

Heterocerus fusculus – a variegated mud-loving beetle
Status: [Nationally Rare (NR), IUCN Vulnerable]
Like the other members of this genus, the present species is most easily observed in the field by splashing water onto bare muddy margins of pools, at which point the beetles rapidly emerge from their burrows in the mud and usually take flight. This particular species was until recently, believed to be restricted to the seepages at the base of coastal cliffs on the Isle of Wight until this author and a colleague noticed that they were finding the species in inland counties at actinic light traps. Thus the distribution of the species has been greatly misunderstood and inland records have undoubtedly been passed off by many, as aberrant dark-legged examples of the related *H. fenestratus*. Both the British Rarity and IUCN statuses of *H. fusculus* are therefore in need of re-evaluation and are very likely to be removed. On the 2022 survey, a single adult was recovered from pitfall trap lines on the east edge of the north pasture of Scarfe Meadows on April 25.

Lathrobium fovulum – a paederine rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a moderately large predatory rove beetle of wetland habitats including marshes and fens, where adults are usually recorded from wet vegetation litter. The species has been recorded in all months of the year. It is widespread but very locally distributed in central and southern England and Wales, and also from northern England and central and southern Scotland, although it becomes more scarce further north. In East Anglia, it is regularly recorded and not infrequent. The species has only very recently been designated with a British rarity status. At the LOHP sites, it was recorded outside of the 2022 survey, on November 27, 2017, when a male was sieved from a grass tussock at Broomscot Common.

Lygephila pastinum - Blackneck
Status: no British Rarity status, IUCN Near Threatened
This species flies in June and July and is distributed very locally throughout England and Wales, north to Yorkshire. It is typically found in wetland habitats including damp grassland where the larvae feed on plants in the Fabaceae, particularly tufted vetch. The species is widely distributed and not infrequent in Norfolk. On the 2022 survey, the species was recorded at the Broomscot Common moth traps on July11/12.

Omalium oxyacanthae – an omaliine rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a relatively small predatory black rove beetle found in a variety of habitats where it can be associated with fungi or carrion; decaying organic material generally. Adults have been found in most months of the year. The beetle is distributed very locally throughout much of Britain. In East Anglia it is very locally distributed and infrequent. On the 2022 survey, one was sieved from vegetation beneath a dead muntjac at Broomscot Common on May 3.

Megamelodes lequesnei – a planthopper
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This small planthopper is associated with wetland habitats. Its British distribution stronghold is in East Anglia (particularly in The Broads), a region which appears to account for around 80% of all records. Elsewhere, there are scattered record in Wales and in England north to Derbyshire. Little is known about the life cycle of this species in Britain. The bug may utilise *Juncus* as a food-plant. Prior to the 2022 survey, three males were swept from fen vegetation at Broomscot Common on October 11, 2021.

Melanapion minimum – Sallow Guest Weevil
Status: Nationally Rare (Red Data Book RDB3), IUCN status not yet evaluated
This small black phytophagous weevil is associated with *Salix* species, both broad and narrow-leaved types, in wetland and fen habitats. The larvae are inquilines in the galls of sawflies of the genus *Pontania,* hence the vernacular name. The weevil is widely distributed but very highly localised in England and Wales. The majority of records are clustered

in the fen regions of East Anglia where it can be found with some reliability. On the 2022 survey, an individual was beaten off willows overhanging the eastern perimeter fence-line of the south-east pasture at Scarfe Meadows on June 9.

Notaris scirpi – a weevil
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated]
This medium-sized grey-black weevil is strongly associated with wetland habitats where it feeds on lesser pond-sedge *Carex acutiformis* and reed-mace *Typha latifolia*. The larvae develop at the roots of the food-plants. Adults are active in the field between April and October. The species is widespread but locally distributed throughout England and Wales. It is fairly frequently encountered and no longer merits its designated 'Notable' status, as at October 2021, it had been recorded from 177 hectads of the National grid. This change in status has yet to be formally acknowledged. On the 2022 survey, an adult was recorded at the edge of 'Ditch 1' at Scarfe Meadows on June 14.

Odontomyia argentata – The Silver Colonel **Fig.5**
Status: Nationally Scarce (NS), IUCN Least Concern
This is a moderately large soldier fly with striking silver pubescence on the abdomen. The larval development of this species occurs in wetland habitat in shallow flood-plains in unimproved grassland, typified by the East Anglian fen districts where it is perhaps most frequently recorded. The British distribution sits below a line drawn from the Wash to the Bristol channel with most records occurring in the east and fewest in the west of this range. There is a possibility that the species is undergoing expansion in its range. On the 2022 survey, at Scarfe Meadows, a female was swept at the edge of 'Ditch 2' and another was swept at the 'Inundation' in the north field, both on April 25.

Oodes helopioides – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is an unmistakeable ground beetle, resembling *Amara* in its ovoid shape, but having a more depressed and purely black appearance. It is unique amongst ground beetles in having an amphibious habit. The adult beetles can forage underwater and are thus semi-aquatic, yet they are most often observed by the recorder through sieving waterside vegetation and tussocks and pitfall-trapping. As a wetland inhabitant, the beetle is most frequently associated with fens, grazing marshes, wet heaths, water meadows and pingos. The species is widespread but very locally distributed in England and Wales, with reports also from Scotland. Adults have been recorded throughout the year. On the 2022 survey, two individuals were recorded at Scarfe Meadows in pitfall traps at the edge of 'Ditch 2' on April 25 and a singleton was recorded in similar circumstances on June 14.

Pardosa tenuipes (previously proxima) **–** A wolf spider
Status: Nationally Scarce (NS), IUCN Least Concern
This highly active ground-dwelling predator, is associated with damp habitats and wetland localities, typically at the margins of streams. Many of its known sites in England, Wales and south-west Scotland are coastal. Adults are most often encountered in the field between May and July. On the 2022 survey, single adult males were recovered from the 'Ditch 2' and north meadow 'Inundation' pitfall trap series at Scarfe Meadows on June 14.

Pelosia obtusa - Small Dotted Footman
Status: Nationally Rare, IUCN Near Threatened
Discovered new to Britain in 1962, this moth is a rare species Nationally that is almost exclusively restricted to the dense reed-bed habitats of the fens in the Norfolk Broads. The larvae probably feed on lichens and algae. The single generation of the year gives rise to adults in July. On the 2022 survey, the species was recorded at the Scarfe Meadows moth traps on July 12.

Pterostichus gracilis – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
In appearance this predator is unexceptional, representing a typical black ground beetle of the *Pterostichus* genus. It is found in damp, lush vegetation at the margins of lakes, ponds, reservoirs, riverbanks and other wetland habitats. The beetle is widely distributed but decidedly local in England and Wales, northwards to Lancashire with scattered outlier populations in Scotland. On the 2022 survey, two males were found in pitfall traps in the south-west meadow of Scarfe Meadows on April 25 and two adults were in pitfall traps along the edge of 'Ditch 2' on June 14.

Stenocranus fuscovittatus – a planthopper
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated

This small pale brown planthopper is found in wetland habitats including wet meadows, where it is associated with grasses and sedges. Adults are present between June and September. The species is very locally distributed in England and Wales, and appears to be primarily restricted to East Anglia in the former country. On the 2022 survey, an adult was swept in the south-west meadow at Scarfe Meadows, on April 25.

Stenolophus skrimshiranus – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This black and orange predatory beetle inhabits fens, marshes and other water edge habitats where it is most likely to be encountered amongst dense vegetation. Adults are most frequently found in the spring, from March through to June. The species is widespread but locally distributed in southern England, with most records occurring south of an imaginary line drwan from the Wash on the east coast to the Bristol channel in the west. The beetle is widely distributed if infrequent in Norfolk. On the 2022 survey, the species was recorded at Broomscot Common where singletons were sieved from a fen litter heap and from vegetation debris at the edge of the main ditch near 'Pond 1' on April 18 and at Scarfe Meadows, one was sieved from vegetation litter at the edge of 'Ditch 2' near the field gate on April 12 and another was recovered from pitfall traps along 'Ditch 2' on June 14.

Stenolophus teutonus – a ground beetle
Status: [Nationally Scarce (NS), IUCN Least Concern]
This strikingly-coloured black and orange predatory species is typically found on bare ground at the edges of water, in gravel pits and around newly-created pools on sandy substrates. In Britain it is found in England mainly south of an imaginary line drawn from the Wash on the east coast to the Bristol Channel on the west coast, with the main swathe of distribution in the south-east, from Dorset through Hampshire, the Thames estuary and East Anglia. It has also been recorded from south Wales. The species is probably expanding its range Nationally and may no longer merit the status of Nationally Scarce. On the 2022 survey, an adult was recovered from pitfall traps at Scarfe Meadows along the edge of 'Ditch 2' on June 14 and at Broomscot Common one was sieved from a grass tussock on November 27, 2017.

Stenus butrintensis – a rove beetle
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This elongate black predatory rove beetle is found in wetland habitats, usually at the edge of rivers and lakes and is invariably swept from tall emergent plants at the water's edge. It favours *Typha.* Its distribution is scattered in east, central and northern England and Wales. In Norfolk, it is very localised. On the 2022 survey, six were swept from tall vegetation flanking 'Ditch 1' at Scarfe Meadows on April 12 and a single female was swept here also, on June 14.

Tabanus maculicornis – Narrow-winged Horsefly
Status: Nationally Scarce (NS), IUCN Least Concern
This is a large, mainly dark horsefly, characterised by the narrow wing alulae and the extensively orange antennae. It is widespread in the southern half of England and Wales, where it frequents mainly wooded habitats, usually in the vicinity of wetland features such as streams, marshy grassland or seepages. The larvae live in the saturated ground layer of grassland/wetland and are predatory on smaller soft-bodied invertebrates. Adult females attack mammals to take a blood meal. Like other *Tabanus* the present species alights on the legs of its host, which at LOHP is likely to be the grazing cattle. Males do not bite. On the 2022 survey, an adult was swept at Scarfe Meadows on June 9.

Lichen Heath/Heathland short-turf Species

Amara lucida – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small ovoid bronze ground beetle is most often encountered in coastal regions of England and Wales where it inhabits sandy areas such as dune systems and is also found on coastal shingle. There is however, a cluster of records from the Breckland region and environs in East Anglia and other scattered inland records, mainly in the east of England. The larvae are predatory, whereas the adults are phytophagous, feeding on seeds. On the 2022 survey, adults were recovered from the breck heath pitfall trap lines at Broomscot Common on May 3 (6 adults), June 14 (16 adults) and July 15 ('many' adults).

Amara montivaga – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern

This moderately large oval bronze-metallic ground beetle is a seed-eater, associated with open sandy or chalky sites in early succession (e.g. post-industrial and recently disturbed) and those with sparse ephemeral vegetation communities. It appears to be a recent immigrant to the UK, first recorded in 1934 and now widely distributed across southern England, with the majority of records in the south-east. There are also a small number of records in Wales and in Scotland. In Norfolk, the species is widespread and fairly frequently recorded in suitable habitat. On the 2022 survey, a single beetle was recovered from pitfall traps in breck heath at Broomscot Common on June 14.

Anania verbascalis - Golden Pearl
Status: Nationally Scarce Notable B, IUCN status not yet evaluated
Habitats in which this grass moth is found include breck heath, open forestry plantations and vegetated shingle, where the larva feeds on wood sage. The species is single brooded with adults usually observed between mid June and July. Its British distribution is predominantly south-eastern. In Norfolk, the main population centres are in the breckland region, north-west Norfolk and the Broads. On the 2022 survey, the species was recorded at the Broomscot Common moth traps on July 11/12.

Arenocoris fallenii – Fallen's Leatherbug
Status: Nationally Scarce (NS), IUCN Least Concern
This is a ground-dwelling species that feeds on seeds of common stork's-bill *Erodium cicutarium* where the food-plant grows in sandy short turf grassland or on sparsely-vegetated ground on free-draining substrates. The species is most often encountered by searching beneath the basal rosettes of the plant or by pitfall-trapping in suitable habitat. Its distribution centres primarily on East Anglia, the south-east of England and coastal south Wales, although there are odd outlier records elsewhere in England and Wales. On the 2022 survey, the bug was recorded at Broomscot Common on the breck heath area, with an adult in pitfall traps on June 14. An adult was also recorded here on July 29, 2019.

Atomaria scutellaris – a silken fungus beetle
Status: [Nationally Rare (Red Data Book RDBK), IUCN status not yet evaluated]
This is a diminutive yellow-brown beetle which usually has distinctive but diffuse pale patterning on the wing cases. It was first recorded in Britain from the Scilly Isles in 1968 and has since expanded its range to include extensive swathes of the southern and eastern coastlines of England along with smaller coastal stretches in Cornwall and south Wales. There are also inland records from North Norfolk into the breckland region and also from the Thames gateway. The beetle is typically found in grassland and disturbed ground where the soil is free-draining and sandy. It is particularly frequent on dune systems. Due to its current distribution, it is unlikely to still merit its British Rarity designation. In Norfolk it is regularly recorded. On the 2022 survey, three were recorded at Scarfe Meadows on April 12.

Bodilopsis ictericus – a dung beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This yellow dung beetle is widespread but very locally distributed in England where its strongholds appear to be in East Anglia (West Suffolk and West Norfolk) and in south and south-eastern England (Berkshire, Hampshire, Surrey, Sussex and Kent). The species is rare in Scotland and Wales. It is found on pasture on free-draining chalky or sandy soils, including grazed sand dune systems, heathland and breck grassland where it is associated with exposed and fairly dry sheep, horse and cattle dung mainly, but it is also rarely found in rabbit and fox dung. Adults have been recorded mainly from July to September. At the LOHP sites, the species was found at Broomscot Common in sheep dung on June 30, 2017. Its presence at the site is likely to be dictated by the grazing regime, so its absence in 2022 might be due to the temporary cessation of sheep-grazing in this current year.

Brachypera dauci – a weevil
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This is a moderately large, distinctive attractively-patterned weevil that is found in sandy places in grassland and in dunes and on disturbed ground where it feeds on common stork's-bill *Erodium cicutarium*. The larvae feed externally on the foliage whilst adults are often found at the base of the food-plant. The species usually requires large plants in open situations. In Britain it is found primarily in coastal regions of England and Wales, with the exception of a cluster of records in the East Anglian Brecks and inland also in north-west Norfolk. On the 2022 survey, 19 adults were recovered from pitfall traps on the breck heath at Broomscot Common on May 3.

Cerceris quinquefasciata - Five-banded Weevil Fox
Status: Nationally Rare (Red Data Book 'RDB3 - Rare'), IUCN status not yet evaluated, UK BAP NERC S. 41 Species of Principal Importance in England

This black and yellow-banded solitary wasp is associated with dry open sandy situations. Although widely distributed in southern/south-eastern England, this is currently a relatively rare species with modern records only from Kent, Essex, Suffolk, Norfolk and Oxfordshire. Its main strongholds appear to be The Breckland regions and the Suffolk Sandlings of East Anglia. Adults visit flowers of creeping thistle and bramble for food sources. The wasp nests in loose 'colonies' in dry open sandy situations such as tracks and pathways, often where the sand is compacted. They stock the nests with prey items for the developing larvae, which include small weevils of the genus *Sitona* and the family Apionidae. The species is itself preyed upon by the ruby-tailed wasp parasitoid *Hedychrum niemelai*. The adult flight season is from mid-July to late August. On the 2022 survey, three males were swept off flowering fool's watercress *Apion nodiflorum* along the main ditch at Broomscot Common on July 15.

Chilothorax distinctus – a dung beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a yellow dung beetle with black dash markings on its wing cases. It is found on grazed pasture on sandy soils, in various types of dung and vegetable debris, but possibly with a preference for horse dung. The beetle is locally distributed in England with a distinct bias for the eastern half of Britain. The distribution extends up into Scotland. The species is particularly well-represented on free-draining substrates in East Anglia, its probable main stronghold Nationally. On the 2022 survey, an adult was recovered from the breck heath pitfall trap lines at Broomscot Common on May 3.

Dasypoda hirtipes – Pantaloon Bee
Status: Nationally Scarce, IUCN status not yet evaluated
The Pantaloon bee's name is derived from the appearance of the expanded pollen brushes on the hind legs of the female bee. The species is most often found in coastal and heathland habitats, where the females excavate nest cavities in sandy substrates. They often nest 'colonially', although within the colony each female tends to their own nest. The bee favours Asteraceae as foraging sources of nectar and pollen, in particular yellow-flowered species such as ragwort *Senecio sp* and common fleabane *Pulicaria dysenterica*. The flight period of adults is from June to late August. Its distribution is mainly around the coastal fringes of south-east England and Wales, with clustered inland records around the Thames Gateway and the East Anglian breckland regions. On the 2022 survey, several foraging individuals were swept in grassland close to the dipping pond 'P1' at Broomscot Common on July 15.

Eulamprotes wilkella - Painted Neb
Status: Nationally Scarce Notable B, IUCN status not yet evaluated
The larvae of this minute moth feed on ground mosses in habitats such as grey dunes and breck grassland, where the substrate is free-draining. It is distributed very locally in many coastal areas of Britain, particularly in south and eastern England. There are two generations annually, with adults generally being observed in the field between June and August. In Norfolk, the species is mainly found in coastal and breckland regions. On the 2022 survey, the species was recorded at the Broomscot Common moth traps on July11/12.

Euxoa tritici - White-line Dart
Status: no British Rarity status, IUCN Vulnerable
This is a noctuid moth of varied habitats including heathland, downland and coastal dunes. The larvae are polyphagous on a range of herbaceous plant species. Adults are usually recorded between July and August. Although still widespread throughout its range, it is restricted to the coastal fringe in many regions and the species is experiencing a recent steep decline, hence its designation under IUCN criteria. In Norfolk, the distribution is very much biased towards coastal and breckland regions. On the 2022 survey, the species was recorded at the Broomscot Common and Scarfe Meadows light traps on July11/12.

Glocianus pilosellus – a weevil
Status: Nationally Rare (Red Data Book RDB2 = 'Vulnerable'), IUCN status not yet evaluated
This is a small black weevil of grassland on sand dunes, downland, sandy habitats and disturbed ground. The food-plant is lesser dandelion *Taraxacum laevigatum*. The larvae probably feed in the flower-heads. In Britain, its distribution covers south and eastern England and South Wales only. It is relatively scarce in East Anglia where it is known mainly in the breckland and in breck grassland sites in north-west Norfolk. In the surveyor's experience, adults have been found in the field between April and June and in August and September. On the 2022 survey, a singleton was recovered from pitfall traps on breck heath at Broomscot Common on May 3.

Gymnetron rostellum – a weevil

Status: Nationally Scarce (Notable A), IUCN status not yet evaluated
This is a small nondescript dark weevil found in disturbed ground habitats, sand pits, roadside verges and field margins. It is probably associated with speedwells *Veronica sp* as a food-plant. The species is mainly found in eastern England, with scattered outliers elsewhere. It is currently very scarce in East Anglia, where it is known from the brecks and the coastal regions. On the 2022 survey, two adults were swept at Scarfe Meadows, from the north pasture on April 12.

Harpalus anxius – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small black ground beetle feeds on seeds in short turf high insolation habitats, typically e.g. on fixed dune systems, disturbed sandy sites, breck heath etc. It is widespread in Britain, particularly around the coast of England and Wales, and also found inland in the south of its range, predominantly in the breckland region of East Anglia and the Thames Gateway. In Norfolk it is regularly found on the coast and from the brecks north-west to the north-west Norfolk coast. On the 2022 survey, adults were recovered from the breck heath pitfall trap lines at Broomscot Common on May 3 (13 adults), June 14 (16 adults) and July 15 (11+ adults).

Harpalus smaragdinus – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This moderately large seed-eating ground beetle is typically found in high-insolation habitats with free-draining soils, such as chalk pits, sparsely-vegetated arable margins and breck heath. In Britain, it is found south of an imaginary line drawn from the Humber estuary on the east coast through north Wales in the west. Many records are coastal outside of the south-east part of its range where it is also found inland. There is a particularly strong representation of the species in the Norfolk breckland. On the 2022 survey, a single individual appeared in pitfall traps on breck heath at Broomscot Common on June 14.

Hedychrum niemelai – a ruby-tailed wasp
Status: [Nationally Rare (pRDB2 (provisional status = Vulnerable), IUCN status not yet evaluated]
This is a brightly coloured and spectacular ruby-tailed wasp found in open, sandy localities such as dunes, quarries and tracks and pathways. As a parasitoid, its hosts are weevil-wasps or digger-wasps; species of the genus *Cerceris.* The ruby-tailed wasp seeks out nests of the host and lays its eggs in the nest. The larvae hatch and consume the grubs of the host. For nectar sources, the wasp is known to visit golden-rod, woundwort and yarrow. The species is found in southern England with records from Cornwall to Kent and north to Oxfordshire, Norfolk and Lincolnshire. It was assessed as being of provisional Red Data Book status by Steve Falk in 1991, but the BWARS website considers that it's current status should be downgraded. In Norfolk, the species' distribution centres around The Brecks, with outlying records to the north and east. The species wasn’t recorded on the 2022 survey. However, a male was swept at Broomscot Common on July 29, 2019.

Hippodamia variegata – Adonis Ladybird
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated]
This is a medium-sized brick-red ladybird with a varying number of black spots and characteristic black and white patterning on the thorax. Like most ladybirds, it is a predator of aphids. Its distribution extends throughout southern, eastern and central England as far north as Cumbria and Tyne and Wear. In Cornwall, Wales and Scotland it becomes rather more scarce. It was formerly only commonly found on the English coast, but since the 1980s, it turned up increasingly at inland post-industrial sites and other areas of short-turf grassland and disturbed grassland habitat, so although formerly considered Nationally Scarce, it is now so regularly encountered in suitable habitat, that it can only qualify as locally distributed at such time as its British Rarity status is re-evaluated. The beetle was recorded on the 2022 survey at Broomscot Common on July 12, and was also recorded at this site on July 29, 2019.

Hypsosinga albovittata – an orbweb spider
Status: Nationally Scarce (NS), IUCN Least Concern
This small predatory orbweb spider typically inhabits heathland and chalk grassland where it constructs a web close to the ground. The species is widely distributed throughout Britain but very localised within its range. Adult spiders are usually observed in late spring and early summer. In Norfolk, the majority of records are centred on the breckland region. On the 2022 survey, an adult male was recovered from pitfall trap samples on breck heath at Broomscot Common on May3.

Megalonotus praetextatus – a groundbug
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated

This is a distinctive medium-sized glossy dark ground bug with pale wing markings. It requires well-drained soils with a warm, sheltered aspect such as those in sand dune systems, gravel pits, sandy grasslands and breck heath. In such situations it is frequently associated with stork's-bill *Erodium*. Adults are active in the field between April and September. The bug is predominantly southern and coastal in south and east England and South Wales, but with inland records from the Breckland and other areas of southern England. Prior to the 2022 survey, an adult was found in typical habitat on the breck heath at Broomscot Common on July 29, 2019.

Megalonotus sabulicola – a groundbug
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This is a small nondescript brown ground bug with pale tibiae which is found in sandy habitats on sparsely-vegetated ground, most typically in breck grassland and disturbed sites. The food-plant is probably common stork's-bill *Erodium cicutarium*. The majority of records are from the English south coast, south-east England and East Anglia. On the 2022 survey, an adult was found in pitfall traps on the breck heath at Broomscot Common on June 14, and prior to the survey, an adult was recorded at the same site on October 11, 2021.

Nysius graminicola – a ground bug
Status: [Red Data Book 3 (Rare), IUCN status not yet evaluated]
This small brown ground bug was first discovered in Britain at Studland Bay, Dorset, in the 1980s, when it was assigned RDB status. It has since spread and rapidly so in very recent years, such that it is now distributed across at least nine Vice-Counties in south-east England and East Anglia. The species is characteristic of sun-exposed weedy, disturbed ground, such as arable verges and post-industrial brownfield sites, Although essentially a ground-dwelling insect, it can be abundant on flower-heads of various plant species, in warm weather. Adults and nymphs feed on seeds and developing fruits and the adults probably overwinter. Due to its recent expansion in range, it is almost certainly no longer of Red Data Book status in Britain. On the 2022 survey, an adult was swept at Broomscot Common on September 5, possibly representing a first county record for Norfolk.

Odontoscelis lineola – Lesser-streaked Shieldbug
Status: Nationally Scarce (NS), IUCN Least Concern
This rounded brown and yellow bug is found on coastal sand dunes in south England and south Wales, and at sandy heathland sites in Kent, Surrey and East Anglia (mainly in The Breckland). The nymphs feed on Common Stork's-bill *Erodium cicutarium* and overwinter, becoming adult in the spring and mating in June and July. On the 2022 survey the bug was pitfall-trapped on the breck heath at Broomscot Common, with two adults here on May 3 and two also on June 14.

Ophiola decumana – a leafhopper
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This small brown leafhopper is associated with sparsely-vegetated and disturbed-ground habitats where it is known to feed on sheep's sorrel and knotgrass. Adults have been recorded in most months of the year, but in this surveyor's experience, they are most frequent between June and September. The species has a highly localised distribution in England and Wales. On the 2022 survey, five adults were recovered from pitfall traps in breck heath at Broomscot Common on June 14.

Olibrus millefolii – a shining flower beetle
Status: Nationally Scarce (Notable B), IUCN Least Concern.
This minute convex, shiny black beetle is found in grassland, heathland and hedge banks where yarrow *Achillea millefolium* grows. The larvae develop in the flower-heads and adults, which are found mainly between May and September, feed on pollen in the flowers. In Britain, it is widespread and very local in southern England and Wales. It is perhaps most frequent in East Anglia where the food-plant is found on free-draining sandy soils. The beetle was recorded at Broomscot Common on July 29, 2019.

Olibrus pygmaeus – a shining flower beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This minute convex, shiny black beetle inhabits grassland, including marshland, and disturbed ground. The larvae probably develop in the flower-heads of Common Cudweed *Filago vulgaris* and adults feed on pollen in the flowers. The species is mainly recorded from the eastern half of England, with the majority of records from East Anglia where it is well-represented. Along with the last species, this beetle was recorded at Broomscot Common on July 29, 2019.

Oxypoda lurida – an aleocharine rove beetle
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This is a small ground-dwelling ferruginous rove beetle that is associated with short turf habitats and sparsely-vegetated ground on free-draining substrates. Examples of habitats include breck heath, fixed dune systems and rabbit-grazed chalk grassland. The species is very widely distributed in England, Wales and Scotland with a possible preference for coastal locations (?dunes), although inland records are also well-represented. On the 2022 survey, a single specimen was recovered from the breck heath pitfall traps at Broomscot Common on May 3.

Oxytelus piceus – a rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small rove beetle has distinctive yellow elytra and is separated from a superficially similar, more common species *O. laqueatus* by the size of the eyes of the female and by underside characteristics on the abdominal segments of the male. The species is found in herbivore dung, apparently favouring dung on sandy soils in short-turf grassland. It is very locally distributed in England and Wales north to Lincolnshire. There are very few records of the species outside of an apparent stronghold in Norfolk where it occurs fairly reliably on grazed breck heath. In the author's experience, adults are active in the field between May and September. On the 2022 survey a single male was found at the Scarfe Meadow light traps on the morning of July 12.

Pediasia contaminella - Waste Grass-veneer
Status: Nationally Scarce Notable B, IUCN status not yet evaluated
As its name suggests, this small grass moth inhabits disturbed ground, dry grassland, heathland and brownfield habitat. Its distribution in Britain is largely south-eastern. The species is singe-brooded with adults recorded between June and October. The larvae feed on Poaceae, including sheep's fescue. In Norfolk, the species is widely distributed and relatively frequent. On the 2022 survey, the species was recorded at the Broomscot Common moth traps on July11/12.

Pempelia genistella - Gorse Knot-horn **Fig. 4**
Status: Nationally Scarce Notable A, IUCN status not yet evaluated
This pyralid moth inhabits heaths and downs, primarily in coastal regions, where the larvae feed in a silken web on gorse. The species has a southern and eastern range in Britain although it is also known from the south coast of Wales. Adults are mainly recorded between late June and September. It was recorded new to Norfolk in 2019 and remains scarce to date, with only a handful of records. On the 2022 survey, three adults came to light at the Broomscot Common moth traps on the evening of July11.

Rhopalus parumpunctatus - a rhopalid bug
Status: Nationally Scarce (NS), IUCN Least Concern
This is a reddish-brown bug that can be differentiated from similar species in the genus by the abdominal markings, the form of the scutellum and the dark spots on the wing veins. It is highly active in dry, sandy habitats such as grey dunes and breck heath. The adults are flower-visiting and there is an association with many plant species, particularly Mouse-ear *Cerastium.* The bug is locally distributed east of an imaginary line drawn from the Wash on the east coast to west Dorset on the south coast. It is also recorded from the Welsh coastline. Adults are recorded mainly between May and September. On the 2022 survey, an adult was swept in the east section of the fen at Broomscot Common, on July 12. The habitat is atypical for the species, although it is probable that it was either flower-visiting here or seeking an area of higher humidity during the summer burn-out at the site.

Saprinus aeneus – Bronze Mirror Clown
Status: Nationally Scarce (NS), IUCN Least Concern
This is a beetle of open short turf habitats on free-draining soils, including sand dunes, breck grassland and heathland. It is almost always associated with carrion and dung. All active stages of the beetle predate the developing stages of other invertebrates in decaying organic material. Adults have been recorded between April and October. It is a widely distributed species Nationally, but has declined historically. Currently, it is most frequent along the coastal fringes of England and Wales, but it also maintains a significant stronghold inland in and around the Breckland region of East Anglia. On the 2022 survey, the beetle was recorded from a rabbit carcase on the edge of breck heath at Broomscot Common on May 3 and prior to this survey, an adult was sieved from a dead hedgehog in the same area on August 21, 2017.

Saprinus planiusculus – Coastal Clown

Status: Nationally Scarce (NS), IUCN Least Concern
This is a beetle of open short turf habitats on free-draining soils, including sand dunes, breck grassland and heathland. It is almost always associated with carrion and dung. All active stages of the beetle predate the developing stages of other invertebrates in decaying organic material. Adults have been recorded between April and October. It is a widely distributed species in England and Wales, but has declined historically. Currently, it is most frequent along the coastal fringes, but it also maintains a significant stronghold inland in and around the Breckland region of East Anglia. On the 2022 survey, two adults were sieved from a rabbit carcase on the edge of breck heath at Broomscot Common on May 3.

Sibinia primita – a weevil
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated].
This small orange-brown ground-dwelling weevil, is typically found in post-industrial habitats such as sand-pits and quarries but also on coastal shingle, heathland and downland where its food-plant procumbent pearlwort *Sagina procumbens* can be found. The beetle is widespread but local in the southern half of England and also in parts of Wales but there are also more northerly records in England, as far as Lancashire and Yorkshire. Adults occur mainly from April to September. As at October 2021, this species had been recorded in 104 hectads of the National Grid, since 1990 and therefore no longer merits Nationally Scarce designation, although this has yet to be formally acknowledged. On the 2022 survey, a single adult was recovered from pitfall traps on breck heath at Broomscot Common on May 3.

Spathocera dalmanii – Dalman's Leatherbug **Fig. 7**
Status: Nationally Scarce (NS), IUCN Least Concern
This distinctive leatherbug is typically found in short turf habitats such as breck heath, grey dunes and sandy, rabbit-grazed acid grassland sites, where the nymphal stages feed on the stems of sheep's sorrel *Rumex acetosella.* The adults are ground-dwelling and are present in the field between mid-August and late May or early June. The species is currently undergoing significant range expansion and though once a rarity in Britain, confined more or less to the south and south-east coastal counties, it has spread northwards and is now present throughout much of East Anglia also. On the 2022 survey, a single adult was recovered from pitfall traps on breck heath at Broomscot Common on June 14.

Tychius pusillus – a weevil
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated.
This minute grey weevil with yellow tibiae is associated primarily with short turf grassland and disturbed ground sites such as road-side verges and brownfield. Its food-plant is lesser trefoil *Trifolium dubium* although it may also possibly feed on other clover species. In Britain adults have been recorded from May to September. In Britain, its distribution extends through southern England, East Anglia and the West Midlands, with all records occurring south of an imaginary line drawn between The Wash in the east and the Severn estuary in the west. It is widespread but locally distributed throughout this range. Outside of the 2022 survey, an adult was recorded at Broomscot Common on July 29, 2019.

Zelotes electus – a ground spider
Status: Nationally Scarce (NS), IUCN Least Concern
This spider is found at ground level in moss and litter. Its main habitats are dunes, sandy heathland and breck heath and it is mostly restricted to coastal sites around Britain. Adults of both sexes are found mainly from late spring to mid-summer, but occasionally into the autumn. At the LOHP sites in 2022, three adult males were recovered from pitfall traps on breck heath at Broomscot Common on May 3 and a further three males, on June 14.

Grassland/Verge generalist Species

Aleochara brevipennis – a rove beetle
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This small and nondescript brown rove beetle is an inhabitant of the ground layer in grassland habitats and is usually recorded either in pitfall traps or by sieving grass tussocks. Both the adults and the larvae are probably predatory on smaller invertebrates. The adults have been found all year round. The species is widely distributed but local in Britain. Some sources suggest that there have been recent declines, particularly in southern England. On the 2022 survey, the species was recorded in pitfall traps at Scarfe Meadows with singletons in the north and the south-west pastures on April 25, nine individuals in the north meadow traps on June 14 and a single beetle in the north pasture traps on September 9.

Amarochara forticornis – an aleocharine rove beetle
Status: Nationally Rare (Red Data Book 'K' – Insufficiently Known), IUCN status not yet evaluated
This, like the preceding species is another small rove beetle of obscure ecology which is significantly rare in Britain. Hyman (1994) describes the species as being 'possibly subterranean in habit' with records from coastal shingle, sandpits and an estuary. He cites records from Wiltshire, Isle of Wight, East and West Kent, Surrey, Berkshire and West Suffolk before 1970 and only East Sussex in the period since 1969. Roger Booth (pers comm) has seen the species once; 'in Kent, in a sandy area near an old gravel pit'. This author has found the species by pitfall-trapping in short turf in Cambridgeshire in 2021 and other recorders (Mark Telfer, Martin Luff *pers comm et. al*) have found the beetle in Devon, North Somerset and Bedfordshire. It may be increasing its range. On the 2022 survey, an individual was sieved from a *Deschampsia* tussock on November 16. This represents the second record for Norfolk, the first being earlier in the year from Dickleburgh Moor.

Cassida prasina – a tortoise beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a green tortoise beetle with red scutellary marks. The name tortoise beetle refers to the way in which the insect withdraws its legs under a protective 'carapace' when threatened. It is found in grassland and disturbed ground where the food-plant yarrow *Achillea millefolium* grows. The larvae are free-living on the plant. The species is locally distributed throughout southern, south-eastern and Midlands England. Outside of this area, it is decidedly scarce and predominantly coastal with records from Wales, northern England and Scotland. On the 2022 survey, an adult was swept in the fen area of Broomscot Common on April 14, and prior to the survey, the species was also recorded at Broomscot Common on July 29, 2019.

Chiasmia clathrata - Latticed Heath
Status: no British Rarity status, IUCN Near Threatened
This distinctive day-flying moth is typically observed in open habitats, including dry grassland and heathland where the larval food-plants clovers, trefoils and lucerne grow. Adults are usually recorded between May and September, there being two generations of adults annually. Distributed through Britain, the moth is currently in decline, hence the designation under IUCN criteria. In Norfolk, the species remains common and widely distributed in suitable habitats. On the 2022 survey, adults were observed at light traps at both sites on July 11/12, and an adult was also observed earlier in the year at Scarfe Meadows on June 9.

Coenonympha pamphilius – Small Heath Butterfly
Status: British Rarity – Least Concern, IUCN Vulnerable
The familiar Small Heath butterfly inhabits rough dry grassland and heath sites where its larvae feed on grasses, particularly bents and fescues. The adults flight period extends from mid-May to mid-September, with at least two generations produced annually. Small Heath was designated as Near Threatened at the time of the previous LOHP Invertebrate Survey in 2019, but has since been re-evaluated (2021) as Vulnerable due to continuing significant decline of the National population. On the 2022 survey, an adult was recorded at Broomscot Common on September 5.

Ethmia quadrillella – Comfrey Ermel
Status: Nationally Scarce (Notable A), IUCN status not yet evaluated
This is a small micro-moth which is attractively black and white patterned. It inhabits fens and other wetlands, damp open woodlands, gardens, banks and waste ground. The larval food-plant is comfrey *Symphytum sp*, although it is also known to feed on green alkanet *Pentaglottis sempervirens.* The species is locally distributed in England, mainly in the south-east, East Anglia and the north and east Midlands regions. There are outlier records as far north as Yorkshire.
It is well-recorded in fenland habitats in Norfolk. On the 2022 survey, an adult was present in the Scarfe Meadows moth traps on the morning of July 12.

Evergestis limbata - Dark Bordered Pearl
Status: Nationally Scarce Notable B, IUCN status not yet evaluated
This grass moth was first recorded as British in 1993, but it is considered to be a migrant in many regions. It is found as an adult between June and September. The larval food-plants are garlic mustard and hedge mustard where these grow in grassland and verge habitats. In Norfolk, where it was first found in 2019, it is largely eastern in distribution. On the 2022 survey, the species was recorded at the Scarfe Meadows moth traps on July 12.

Megalonotus antennatus – a groundbug
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated.

This brownish, ground-dwelling true bug is found very sparsely in southern England. It is recorded from diverse habitat-types and substrates which include woodland rides, dry and wet grassland, disused clay workings and limestone quarries. The bug is believed to feed on seeds, although no specific plant species-associations are listed in the JNCC review (Kirby 1992). In this surveyor's experience, it is most easily collected by grubbing and sieving and by pitfall-trapping as it rarely strays from the ground. On the 2022 survey, an adult was found close to 'Ditch 1' at Scarfe Meadows on June 14.

Rhinocyllus conicus – a weevil
Status: [Nationally Scarce (Notable A), IUCN status not yet evaluated]
This medium-sized elongate grey weevil is found in grassland where it is phytophagous on spear thistle *Cirsium vulgare* and musk thistle *Carduus nutans*. The adults are active from April to September and are known to hibernate in the turf mat and under bark. Until relatively recently, this species was more-or-less confined geographically to the south coast of England, but it has since expanded its range significantly, colonising inland counties in England and is certainly increasing. The species is found as far north as Yorkshire and has also been recorded in Wales. As of October 2022, the species had been recorded from more than 200 post-1990 hectads in Britain, rendering its British Rarity status invalid, although this has yet to be formally acknowledged. On the 2022 survey, the species was found at Broomscot Common on June 14.

Syntomus truncatellus – a ground beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small black predatory ground beetle inhabits open grassland sites such as grass verges, field edges and grey dunes. Its main area of distribution is in eastern England although it is distributed throughout England and Wales with scattered records north to Yorkshire and outliers in Scotland. It is particularly common in Norfolk. On the 2022 survey, the species was recorded at Scarfe Meadows by sieving a grass tussock in the south-west pasture on November 16 and the beetle was also recorded at this site previously, on June 30, 2017.

Woodland dead wood and fungi Species

Abdera biflexuosa – a false darkling beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small elongate and somewhat cylindrical beetle is mainly black, but characteristically patterned with transverse undulating yellow bars on the wing-cases. It is distributed throughout England as far as north-east England and is also found in Wales. The species is an inhabitant of ancient broad-leaved woodland, parkland, hedgerows and isolated trees. The larvae probably develop in twigs, with records from oak (mainly), ash and lime. Adults have been recorded from April to August. On the 2022 survey, the beetle was recorded at Broomscot Common where two adults were beaten off dead oak boughs at the edge of the fen area along the north perimeter of the site on June 9, and two adults were beaten off oak branches along the south perimeter of the site on July 12.

Anaspis thoracica – a false flower beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small orange-brown beetle has been found increasingly frequently in midland regions and possibly no longer merits the rarity status of Nationally Scarce. Its distribution extends from the southern English counties north to Yorkshire and Lancashire and southern Scotland. It is associated with woodland habitats where the larvae develop in dead wood. Adults are most frequently observed by beating oak and other tree and shrub blossoms and by sweeping beneath trees, between May and September. On the 2022 survey, a female was beaten off an oak on the eastern perimeter of Broomscot Common on July 12.

Aulonothroscus brevicollis - a throscid beetle
Status: [Nationally Rare (Red Data Book RDB3), IUCN status not yet evaluated]
This small and inconspicuous brown beetle can look like a seed to the uninitiated. It is found in association with ancient broad-leaved and pasture woodland where it is found specifcally on oak trees. However, it is increasingly found in other situations such as in hedgerows and possibly no longer merits the Red Data Book status that it received in 1992 (Hyman, 1992). The adults are usually found in the canopy or by beating whereas the larvae probably develop in dead wood. Adults have been recorded from April to October. The species is very locally distributed in southern England with a very scattered distribution centering on East Anglia and Worcesterhire/Gloucestershire with many outliers, for

example in Wales, Warwickshire and around the Thames estuary. On the 2022 survey an adult was beaten from hedgerows at Scarfe Meadows on June 9.

Coeliodes ruber – a weevil
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This reddish-brown weevil is usually an inhabitant of broad-leaved woodland where it is arboreal, feeding on oak and possibly also hazel. It is widely distributed throughout England and Wales as far north as Cumbria and sporadically up into Scotland. In East Anglia, it is very locally distributed in suitable habitat. On the 2022 survey, an adult was beaten off oak foliage along the south fence-line perimeter at Broomscot Common on April 25.

Coeliodes transversealbofasciatus – a weevil
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
This rotund reddish-brown weevil usually inhabits deciduous woodland, pasture woodland and wooded heaths where it feeds on oaks. The eggs are laid in the oak buds and the larvae feed on the female flowers. Adults are mainly recorded between April and August. The species is widely distributed but local, in England, Wales and Scotland. On the 2022 survey, along with the previous species, this weevil was beaten off oak foliage along the south fence-line perimeter at Broomscot Common on April 25.

Hadrobregmus denticollis – a wood-boring beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This species occurs in broad-leaved woodland, pasture woodland and on isolated trees where the adults and the larvae develop in dead wood of oak, elm, hawthorn and willow amongst other tree species. Adults have been recorded throughout most months of the year. The species is found in England, mainly in the west Midlands and East Anglia. On the 2022 survey, an adult was beaten from a dead hawthorn bough protruding from the north perimeter hedgerow at Scarfe Meadows on June 9.

Thalycra fervida – a sap beetle
Status: Nationally Scarce (Notable B), IUCN status not yet evaluated
The ecology of this reddish beetle is little understood. It may be a saproxylic species in the context of its presence at sap runs of goat-moth infected trees, or alternatively, it may develop mainly in underground fungi such as truffles. It inhabits broad-leaved woodland, parkland and in Scotland, coniferous woodland. The beetle may be mainly active in the evenings. Adults have been recorded between June and September. Its distribution is widely scattered but very localised, in England and Scotland. In Norfolk it is extremely scarce, there being only a few records to date. On the 2022 survey, an adult was found at one of the Scarfe Meadow light traps on the morning of July 12.

Lissodema denticollis – a narrow-waisted bark beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small brown beetle with pale reddish-yellow markings is found in woodland, pasture woodland, hedgerows and on isolated trees, usually in dead wood or under bark, but also by sweeping under and around trees. It is found on a variety of tree species, but with a probable preference for ash. The larvae probably develop in the dead wood. The species is widespread but local in England. On the 2022 survey, an adult was recorded by beating trees at Broomscot Common on June 9.

Magdalis cerasi – a weevil
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated]
This dull black weevil is distributed locally throughout England and Wales where it occurs in woodland, scrub and hedgerows on oak and also on shrubs of the Rosaceae, particularly hawthorn *Crataegus monogyna*. The larvae feed inside branches and dead twigs. Adults can be found between May and August. As of October 2022, the species had been recorded from more than 100 post-1990 hectads in Britain, rendering its British Rarity status invalid, although this has yet to be formally acknowledged. On the 2022 survey, an adult was beaten off hawthorn at Broomscot Common on June 9.

Marpissa muscosa – a jumping spider **Fig. 6**
Status: Nationally Scarce (NS), IUCN Least Concern
This distinctive, large jumping spider is usually encountered behind loose bark or on fence palings, except on the south coast where it may inhabit dry stone walls. Its distribution is centred on the southern regions of East Anglia, through the Thames Gateway into south-eastern England. Elsewhere in Britain, it is very scarce, with a few scattered outlier populations. In Norfolk, it is recorded from the breckland region. On the 2022 survey, spiders were observed regularly

on the gateway posts at the entrance to Scarfe Meadows, with records in April, June, September and October. It was also recorded here in June 2017.

Mordellistena variegata – a tumbling flower beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This is a small tumbling flower beetle that has a typically elongated terminal abdominal segment and a jumping habit when captured or disturbed. The beetle is a fuscous brown colour and is patterned with darker markings. The larvae develop in decaying wood. Adults are most often encountered visiting flowers such as umbellifers in and at the edge of 'wooded' habitats. The species is primarily distributed in midland, south-east and eastern England, being very scarce elsewhere in the country. Adults are active in the field between July and September. On the 2022 survey, the beetle was recorded at Broomscot Common where one was beaten off dead oak boughs at the edge of the fen area along the north perimeter of the site on July 15, and one was beaten off oak branches along the south perimeter of the site on June 9.

Orthoperus nigrescens – a minute hooded beetle
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated]
This minute brown beetle is usually found in woodland, often in association with decaying organic matter, such as fungoid wood. Adults have been recorded in most months of the year. The species is considered to be perhaps the commonest member of the genus with a widespread distribution, so its British rarity status is likely to be invalid (M.G.Telfer *pers comm*). On the 2022 survey, the species was recorded at Broomscot Common on June 9.

Platystomos albinus – a fungus weevil
Status: Nationally Scarce Notable B, IUCN status not yet evaluated.
This is a large, cryptically-coloured black and white weevil which despite its appearance as a bird-dropping, is spectacularly marked and very conspicuous when active. It is associated with dead wood of hornbeam, oak, hazel, ash and hawthorn during its larval development. The beetle has been recorded primarily from deciduous and pasture woodland with a distribution which embraces southern England northwards to Westmorland. Currently, it is widely distributed, but somewhat local in Norfolk. On the 2022 survey, one was beaten off a large ash branch lying on the ground beneath a tree, in the south-east pasture at Scarfe Meadows, on June 9.

Sphindus dubius – a cryptic slime-mould beetle
Status: Nationally Scarce Notable B, IUCN status not yet evaluated.
This minute black beetle is primarily associated with pasture and deciduous woodland habitats where it develops in myxomycetes (slime moulds) on trees. Adults have been recorded on oak, beech, pine and horse chestnut, and have been observed from May to September. The species is widespread but locally distributed in England and Wales, and is also apparently known from Scotland. On the 2022 survey, an adult was beaten off dead hawthorn and oak branches along the north perimeter of the site at Broomscot Common on July 15

Woodland/Arboreal generalist Species

Lasius brunneus – Brown Tree Ant
Status: Nationally Scarce (Notable A), IUCN status not yet evaluated
First recorded in Britain in 1923, this small ant is readily identifiable by the pale brown head and trunk contrasting with the darker black-brown gaster (abdomen). It creates nests in old mature trees and also stumps etc in hedgerows. It is perhaps mainly associated with oak. The adults feed on honeydew collected from large tree aphids although they may supplement this with small invertebrates. It has only been recorded from southern and central English counties, from Essex to Shropshire. On the 2022 survey it was encountered at both sites. At Scarfe Meadows, adults were found in an old hawthorn log on the ground on April 12 and adults were also beaten off *Salix* along the east site perimeter of the south-east meadow on June 9. At Broomscot Common, the ant was present on a willow stump at the edge of the carr/inundation area on April 18.

Nephus quadrimaculatus – a ladybird
Status: [Nationally Rare (RDB2 = Vulnerable), IUCN status not yet evaluated]
This is a diminutive dark brown species with four distinct orange patches on the wing cases. It is found in woodland, gardens and hedgerows where it feeds on coccid bugs on ivy. Adults are recorded from March and from July through to September at least. They probably hibernate in ivy vegetation. It was formerly a rare species with records only from Suffolk, but since the 1990s, it has increased in range and is now relatively frequent in south-east England and East Anglia. It has yet to be recorded from Scotland. The British Rarity status of NR (Red Data Book category Vulnerable) is

certainly no longer applicable to the species' true distribution, but this status has yet to be formally re-evaluated. It is included here on the basis of a record on October 11, 2021, when adults were beaten off ivy next to 'Pond 2' at Broomscot Common.

Rhagonycha lutea – a soldier beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This moderately small, elongate soldier beetle with soft wing cases is distinctive in having ochraceous wings with black tips. A similar colour pattern is present in the associated common soldier beetle *Rhagonycha fulva,* but that species has a reddish rather than buff ground colour and is present in the field generally later in the season. *R. lutea* is usually associated with woodland or scrubby calcareous grassland where adults can be found from late May through to mid July. It is a predatory species. Its distribution extends through England and Wales, northwards up into Yorkshire. It has also been recorded rarely in Scotland. On the 2022 survey, an adult was recorded at Scarfe Meadows on June 14.

Tremulicerus fulgidus – a leafhopper
Status: Nationally Scarce (Notable), IUCN status not yet evaluated
This leafhopper is a phytophage on black and Lombardy poplars, particularly where these are present in the vicinity of running water. Adults have been recorded in most months of the year, though mainly from June to October. The species is distributed very locally throughout England and into Scotland. On the survey, an adult was attracted to the light traps at Broomscot Common on the evening of July 11.

Watsonalla binaria - Oak Hook-tip
Status: no British Rarity status, IUCN Vulnerable
The larva of this moth feeds on oak foliage in woodland, parkland, hedgerows and gardens. Adults of this distinctive moth fly by day and night and have been recorded between May and September. The species is experiencing a continuing steep population decline across its range in England, Wales and south-west Scotland, although it is still relatively common and widespread, as is the case in Norfolk. On the 2022 survey, the species was recorded at the Broomscot Common moth traps on July 11/12.

Non-habitat Specific Species

Aleochara verna – a rove beetle
Status: [Nationally Rare (Red Data Book RDBK 'Insufficiently Known'), IUCN status not yet evaluated]
This small aleocharine rove beetle is found principally in dung, although it also occurs in other decaying organic matter. It is widely but locally distributed throughout Britain, although it appears to be very scarce in Scotland. There is very little information in the literature about the phenology of the species in Britain. In the surveyor's experience, adults have been recorded between April to October and in December. Welch (1997) rightly suggested that the species is probably worthy only of 'Nationally Scarce' status. On the 2022 survey, a single female was found in the breck heath pitfall traps at Broomscot Common on May 3.

Anthocomus fasciatus – a soft-winged flower beetle
Status: Nationally Scarce (NS), IUCN Least Concern
The ecology of this beetle is obscure. It has been found in a variety of habitats including woodland, gardens and fens, between March and September. The likelihood is that, along with other allied species, it develops in the stems of larger plants of rank grassland and verge habitats, but a possible association with dead wood as a saproxylic species, cannot be ruled out. The beetle is locally distributed in central and south-east England and even more-so in south-west England and Wales. On the 2022 survey, an adult was swept at the western edge of the breck heath, near gorse, at Broomscot Common on April 25.

Apterygida media – Hop-garden Earwig
Status: Nationally Scarce (NS), IUCN Least Concern
This earwig can be differentiated from the common earwig *Forficula auricularia* by the fact that the wings do not protrude beyond the wing-cases. The insect is altogether more slender in appearance than its ubiquitous relative. The species inhabits hedges, thickets and woodland edge habitats in warm localities and is restricted in its distribution in Britain, to East Anglia and the south-east. The species was not recorded on the 2022 survey, but was found in 2017 when two adult females were beaten off bramble at the entrance to Scarfe Meadows on August 21.

Atheta (s.g. Alaobia) scapularis – an aleocharine rove beetle

Status: Nationally Scarce (Notable), IUCN status not yet evaluated
The ecology of this small rove beetle is not fully understood although it is thought that the larvae are parasitoids on glow worm *Lampyris noctiluca*. The species is very locally distributed in England, Wales and Scotland. The beetle has been recorded from a chalk quarry and on chalk downland, and from fungi and flight interception traps in ancient pasture woodland, with records between May and September and in January. On the 2022 survey, a female was sieved from grass etc beneath a dead muntjac adjacent to the fen at Broomscot Common on June 9.

Dermestes murinus – a hide beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This species plays a vital role in the late-stage decay of carcases as the larvae (in particular) feed on the dry tissue, skin, feathers and hide. It occurs in the carrion of mammals, birds and fish. The larvae have also been found in nests of predatory birds. The beetle is widespread throughout England and Wales, but is perhaps declining except in East Anglia where it can still be found commonly. On the 2022 survey, the beetle was recorded from a rabbit carcase at the edge of the breck heath at Broomscot Common on May 3.

Grypus equiseti – Horsetail Weevil
Status: [Nationally Scarce (Notable B), IUCN status not yet evaluated]
This cryptically-coloured grey, black and white weevil occurs in a variety of grassland habitats including brownfield, verges and wetland, where it is associated with its food-plants Field Horsetail *Equisetum arvense* and Marsh Horsetail *Equisetum palustre*. The larvae feed in the stems. Adults have been observed in the field between March and September. The species is recorded widely across England, Wales and Scotland. As at October 2021, the species had been recorded from 214 post-1990 hectads of the National grid and as such, this invalidates its British Rarity status, although this has yet to be formally acknowledged. On the 2022 survey, an adult was swept from the lower pastures at Scarfe Meadows on April 25.

Opomyza punctata – an opomyzid fly
Status: Nationally Scarce (Notable), IUCN Least Concern
This small pattern-winged fly is probably associated with tall sward grassland and scrub, although the associations are not clear, as it has also been recorded from marshland, coastal dunes and heath. The larvae probably develop in grasses. Adults are recorded between July and September. It is a widely distributed species in England and Wales. On the 2022 survey, an adult was swept on September 5 at Scarfe Meadows.

Orsodacne cerasi – a ravenous leaf beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This yellow beetle occurs in deciduous and mixed woodland habitats throughout much of England and Wales. It is perhaps most frequent in the west of England. Adults feed on anthers and pollen of various flowering plants and shrubs, favouring white flowers. They are active in the field between April and September. The larvae possibly develop in oak shoots. In Norfolk, this is a relatively scarce species. On the 2022 survey, one was beaten out of the north perimeter hedgerow at Scarfe Meadows on June 9.

Tachinus flavolimbatus – a tachyporine rove beetle
Status: Nationally Scarce (NS), IUCN Least Concern
This small blackish rove beetle has a tapered abdomen and bright yellow margins to the fore-body. It is associated with open ground including gardens, fields, coastal habitats and the foreshore where it is found in a variety of decaying organic matter, including dung. Its British distribution is centred on south-east England and East Anglia. There are an increasing number of British records (well over 50), from West Norfolk, West Kent and Cambridgeshire. On the 2022 survey, a single adult was present in a pitfall trap on the edge of ‘Ditch 2’ at Scarfe Meadows on April 25. Prior to the survey, an adult was recorded at Broomscot Common on October 11, 2021.

Fig. 3 The 22-spot Ladybird *Psyllobora vigintiduopunctata* Scarfe Meadows (photo: Andy Brown)

Fig. 4 Gorse Knot-horn *Pempelia genistell*a Broomscot Common (photo: Andy Brown)

Fig. 5 Silver Colonel *Odontomyia argentata* Scarfe Meadows (photo: Andy Brown)

Fig. 6 The jumping spider *Marpissa muscosa* Scarfe Meadows (photo: Andy Brown)

Fig. 7 Dalman's Leatherbug *Spathocera dalmanii* Broomscot Common (photo: Andy Brown)

Fig. 8 Giant Long-palp *Tipula maxima* Broomscot Common (photo: Andy Brown)

6.3 BAP Priority Species (Research Only) Lepidoptera

A number of Lepidoptera species are of National BAP Priority (Research Only) status and as such they fall under the NERC Act 2006 legislation. Species "of principal importance for the purpose of conserving biodiversity" are covered under section 41, which requires that these species need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

There is sometimes a misconception among Ecological Consultants that these BAP (Research Only) Lepidoptera species are highly significant in a conservation context. However, for the most part, they are not treated Nationally through formal individual Species Action Plans and are not intended to play a role in site protection. There is valid concern however, that these Lepidoptera have declined in the UK in the last 40 years, despite still being relatively common and widespread, so they are flagged as Priority BAP species to encourage awareness of their presence at sites and to promote recording and monitoring.

At the LOHP sites, in addition to Small Heath butterfly, Latticed Heath *Chiasmia clathrata*, Oak Hook-tip *Watsonalla binaria* and White-line Dart *Euxoa tritici* (which in any case now merit greater significance as IUCN 'Vulnerable' and 'Near Threatened' species), other Lepidoptera species which fall into the BAP Priority (Research Only) category, recorded on the 2022 survey are Blood-vein *Timandra comae,* Cinnabar *Tyria jacobaeae,* Dot Moth *Melancra persicariae,* Ear Moth *Amphipoea oculea,* Ghost Swift *Hepialus humuli,* Knot Grass *Acronicta rumicis,* Mottled Rustic *Caradrina morpheus,* and Shaded Broad-bar *Scotopteryx chenopodiata.*

6.4 Analysis

Table 4 British Conservation Status invertebrates recorded prior to, and during, the 2022 Survey, organised by relevant habitat/microhabitat.

Site	Aquatic (includes all W/A taxa)	Wetland Terrestrial	Total Aquatic + Wetland	Short-turf Grassland/Lichen Heath	Dead wood Specialist	Habitat generalists	Total Conservation Species
Scarfe Meadows	3	21	24	3	4	16	71
Broomscot Common	5	9	14	32	6	19	85

From Table 4 it is evident by comparing the total numbers of invertebrates with British Rarity and IUCN Threat status for each site, that the most significant wetland assemblage in terms of rarity is from Scarfe Meadows. This total compares favourably with those for the Thelnetham Fen sites, Blo' Norton and Betty's Fens, from the 2021 survey which had lesser totals in this category, of 12 and 17 species respectively. However, a number of the species in this category recorded at Scarfe Meadows were recorded only at light traps and light-trapping was not carried out at the Thelnetham Fen complex wetland sites, so this might account for the differing totals.

A similarly significant high total (approx 24) of key wetland species recorded in the 2019 survey at Oak Tree Fen was undoubtedly due to extensive pitfall-trapping there which boosted the survey total. Pitfall-trapping was not carried out at Betty and Blo-Norton Fens due to the sensitivity of the habitat there, but had it been employed in the methodology, we could have expected higher totals still, than those at both Scarfe Meadows and Oak Tree Fen.

Both Scarfe Meadows and Broomscot Common have similar totals for generalists (those species inhabiting non short-sward grassland and scrub/arboreal habitats as foliage feeders). There is also little difference in the totals of conservation status dead wood specialists (saproxylics), which is not surprising as both sites have mature trees and a similar limited amount of dead wood. Neither site could be considered to be significant for their saproxylic fauna in a regional context, but theses low-level assemblages make a nonetheless important contribution to the overall site biodiversity (see results of Pantheon analysis below).

Unsurprisingly, Broomscot Common has an overwhelming majority of scarce/rare breck heath and short turf invertebrate specialists as compared with Scarfe Meadows (where the habitat is not represented), which has only three species in this category, and two of these were at moth traps, so potentially originating from elsewhere. It is worth comparing the main heath area at Broomscot Common with similar habitat at Hinderclay Fen where 17 Nationally Scarce/Rare species associated with open rabbit-grazed short turf habitat in the 2021 survey, was considered 'impressive'. The total at Broomscot is nearly double that recorded at Hinderclay lichen heath, which demonstrates the significance of this habitat for breck assemblages at this site in particular. As stated in the earlier report, this breck heath component is an important habitat within the larger LOHP site complex, situated as it is outside of the main Breckland region of East Anglia, yet proving to be an outlier of significance for its invertebrate fauna at least. It should be mentioned here that Parkers Piece has a lesser, but still noteworthy assemblage, of short turf habitat species, and produced a total of 13 key invertebrates in this category during the 2019 survey.

6.4.1 Pantheon Analysis & Interpretation

The software 'ISIS' (Invertebrate Species-habitat Information System) was developed largely by Natural England in 2006 for the purpose of analysing species composition of a surveyed locality, and interpreting this data in terms of habitat/species associations and species richness. Shortfalls in this database tool resulted in the development of a successor 'Pantheon', in 2018. This was created by The Centre for Ecology & Hydrology in association with Natural England and improves on the ISIS process by adding, amongst other criteria, associated habitats and resources and habitat fidelity scores, against each taxon in a survey list. The Pantheon database which is available as an online tool, deals with around 11,000 invertebrate species, including all of the most familiar and widely surveyed insect Orders.

In common with ISIS, the Pantheon programme is most effectively used where standardised sampling techniques have been employed in survey work. It enables comparison of resulting data from a fixed frequency of site visits over a fixed time period and could indicate whether the ecological status of a site in terms of its invertebrate fauna, is either improving or deteriorating. This interpretation tool is much less useful for the present survey and most surveys carried out by invertebrate surveyors which are based on 'snapshot' samples taken over a relatively short period or surveys that are biased towards finding the scarcer invertebrates that the site supports. Even so, it can still be a useful tool for producing a hierarchy of significance in terms of species habitat associations and assemblages at any given site and in particular for comparing habitats which are surveyed at approximately the same time of the year as each other, using approximately the same techniques and with approximately the same amount of effort. It is the main analysis tool used by invertebrate surveyors.

The scoring systems in Pantheon use species richness, threat status, British rarity and characteristic species for each broad biotope, habitat and resource. The two Pantheon generated scores used to interpret the survey findings in terms of the habitats and associated invertebrate assemblages, are 'Conservation Status' and the 'SQI' (Species Quality Index) status which themselves are defined as:

Conservation Status: threat and rarity status from published reviews. The conservation status is also used to generate the Species Quality Index. Statuses in square brackets indicate that these statuses are considered out of date and should be used with caution.

SQI: each species recorded from a site list is scored according to its conservation status and the SQI is calculated by dividing this score by the number of species in the sample and multiplying by 100. SQI's for species lists with 15 or fewer species are considered unreliable.

Pantheon, like ISIS, can identify whether a site is in a favourable or unfavourable condition. Thus if a site is considered 'favourable' in the analysis, then it can be loosely construed that the state of the habitat analysed is favourable for the indicator species which are present and for the assemblage for that habitat-type as a whole. The term can also indicate if the conservation management at a site is favourable for that particular habitat and is particularly useful when recording, for example, SSSI localities, to assess whether the habitat condition is improving or declining over a period of time.

Table 5 shows the Pantheon analysis for habitat and assemblages

Table 5 Pantheon analysis results for Specific Assemblage Types ('SATs') at the LOHP sites Scarfe Meadows and Broomscot Common from data collated from the 2022 survey and prior to 2022, showing the number of species representing that habitat sub-category as a percentage of that assemblage in the Pantheon database, the calculated SQI value and whether the analysis gives a Favourable or Unfavourable condition for that specific habitat to support the associated species assemblage.

Compartment	Broad biotope	Habitat	SAT	No. of species	% representation	SQI	Reported condition
A – Scarfe Meadows	tree-associated	decaying wood	bark & sapwood decay	23	5	114	Favourable
A	open habitats		scrub edge	11	5	127	Favourable
A	wetland	acid & sedge peats	reed-fen & pools	10	9	233	Unfavourable
A	open habitats		rich flower resource	8	3	100	Unfavourable
A	open habitats	short sward & bare ground	open short sward	6	3	100	Unfavourable
A	wetland	marshland	undisturbed fluctuating marsh	6	16	280	Favourable
A	tree-associated	decaying wood	heartwood decay	4	2	425	Unfavourable
A	tree-associated	decaying wood	epiphyte fauna	4	20	100	Favourable
A	open habitats		scrub-heath & moorland	4	1	100	Unfavourable
A	wetland	acid & sedge peats	moss & tussock fen	4	9	600	Unfavourable
A	open habitats	short sward & bare ground	bare sand & chalk	3	<1	100	Unfavourable
A	wetland	running water	riparian sand	2	3	600	Unfavourable
A	wetland	marshland	open water on disturbed mineral sediments	2	5	100	Unfavourable
A			epiphyte fauna	2	10	100	Unfavourable
A	tree-associated	decaying wood	fungal fruiting bodies	1	1	100	Unfavourable
Compartment	**Broad biotope**	**Habitat**	**SAT**	**No. of species**	**% representation**	**SQI**	**Reported condition**
B – Broomscot Common	open habitats	short sward & bare ground	bare sand & chalk	30	7	317	Favourable
B	tree-associated	decaying wood	bark & sapwood decay	24	5	175	Favourable
B	open habitats	short sward & bare ground	open short sward	18	9	117	Favourable
B	open habitats		scrub-heath & moorland	17	5	118	Favourable
B	open habitats		scrub edge	12	5	100	Favourable
B	open habitats		rich flower	10	4	100	Unfavourable

			resource				
B	wetland	marshland	undisturbed fluctuating marsh	8	21	186	Favourable
B	wetland	acid & sedge peats	reed-fen & pools	6	5	100	Unfavourable
B	wetland	marshland	open water on disturbed mineral sediments	6	15	100	Favourable
B	wetland	acid & sedge peats	moss & tussock fen	4	9	350	Unfavourable
B	tree-associated	decaying wood	heartwood decay	3	2	200	Unfavourable
B			epiphyte fauna	3	15	100	Favourable
B	tree-associated	decaying wood	epiphyte fauna	2	10	100	Unfavourable
B	wetland	acid & sedge peats	Sphagnum bog	2	2	100	Unfavourable
B	wetland	running water	stream & river margin	1	2	100	Unfavourable
B	tree-associated	decaying wood	fungal fruiting bodies	1	1	100	Unfavourable

The highlighted rows (those entirely highlighted in yellow) are those for which **any** reliability can be placed on the resulting statistics. For these data, the number of represented species meets or exceeds the lower threshold of 15. It is suggested by Pantheon that where the number falls below this minimum threshold, the statistical analysis is potentially unreliable.

The SQI score that Pantheon uses is based on the sum of the conservation scores of the British Rarity-designated species in a sample divided by the **total number of species** in that sample multiplied by 100. Generally speaking, on condition that the 'No. of species' is 15 or more, then the higher the SQI figure, the higher the status of the site for invertebrate assemblages in that habitat bracket. Pantheon works best where standardised sampling is employed at a site because in that situation, the statistical comparison between sites is at its most reliable.

It is important to view Pantheon as one of several tools to be used in combination in the process of evaluating a site and not the only route for analysis or conclusion.

A 'Favourable' result for any set of data analysed by Pantheon suggests that the specific habitat is considered to be of a high quality suitable for supporting a significant associated specialist invertebrate assemblage.

Table 5 above lists all of the habitats and habitat niches for each site that Pantheon recognises from the species data that was fed into this app. Pantheon delivers 'Favourable' condition for both sites for their tree-associated decaying wood, bark and sapwood decay, on account of the number of species representing this habitat niche at both sites, despite the number of conservation value species being relatively small for each.

Predictably, Pantheon considers a whole suite of 'breck' habitats to be 'Favourable' at Broomscot Common. Open habitats, short sward and bare ground, bare sand and chalk scores particularly highly with an impressive SQI of '317' – an accolade for the habitat present here, but also with open short sward and scrub heath (gorse) contributing significant value to the overall short turf habitat mosaic at the site. Pantheon thus provides statistical evidence that this site adequately supports a significant 'breck-type' invertebrate assemblage and in fact, the most significant by comparison, of all of the short turf habitats sampled at the LOHP complex so far.

Scrub edge habitat, although considered 'Favourable' at both sites, falls short in each with less than 15 Pantheon database-represented species being recorded and the result therefore being unreliable. However, the indication here is

that the scrub edge habitats, *i.e.* hedgerow and perimeter scrub, at Scarfe and Broomscot respectively, are noteworthy for the assemblages that they support.

Finally, it is worth noting that the wetland habitats are considered less significant in the analysis, although once again, it could be argued that 'undisturbed fluctuating marsh', delivered as 'Favourable' at both sites, but without the threshold total of species achieved, is at least indicated as being potentially significant even if it fails to exactly qualify as such. The same could be argued for 'open water' at Broomscot Common.

Table 6 outlines guidelines used for assessing the significance of the site in terms of invertebrate habitats, following the guidance produced by Colin Plant Associates (now withdrawn, but in the absence of adequate alternatives is considered appropriate in this evaluation).

Table 6 Guidelines produced by Colin Plant Associates (now withdrawn) **for site significance evaluation**

Significance	Description	Minimum qualifying criteria
International	European important site	Internationally important invertebrate populations present **or** containing any species protected under European legislation **or** containing habitats that are threatened or rare at the European level (including, but not exclusively so, habitats listed on the EU Habitats & Species Directive)
National	UK important site	Achieving SSSI invertebrate criteria (NCC, 1989) **or** supporting sustainable populations of species that are listed as Critically Endangered **or** supporting sustainable populations of species listed in the European Union Habitats and Species Directive **or** supporting sustainable populations of species listed in and generally held to fairly belong within Red Data Book category 1 (Endangered) **or** supporting sustainable populations of any species protected under the UK Wildlife and Countryside Act, as amended **or** containing important invertebrate habitats that are actively threatened nationally (Great Britain)
Regional (for border sites, both regions must be taken into account)	Site with populations of invertebrates or invertebrate habitats considered scarce, rare or threatened in the region	Habitat that is scarce or threatened in the region, or which is well-represented in the region but is absent outside the region, and which has, or is reasonably expected to have, an assemblage of invertebrates that includes a combination of Nationally Rare Red Data book category 3) and Nationally Scarce (former Nationally Notable categories) species amounting to at least ten such species in total **or** supporting sustainable populations of at least six Species of Principal Importance (SPIs) (excluding "research only" moths)

Significance	Description	Minimum qualifying criteria
County (for border sites, both counties must be taken into account)	Site with populations of invertebrates or with invertebrate habitats considered scarce, rare or threatened in the county in question	Habitat that is scarce or threatened in the county **and either** contains or is reasonably expected to contain an assemblage of invertebrates including a combination of Nationally Rare Red Data book category 3) and Nationally Scarce (former Nationally Notable categories) species amounting at least five such species in total provided that these species warrant now that status which was allocated several years earlier. **or** which has viable populations of at least five species regarded as Regionally Scarce by the county records centres and/or field club **or** which has viable populations of at least five SPIs.
District (e.g., Unitary Authority, City, or Borough)	Site with populations of invertebrates or invertebrate habitats considered scarce or rare or threatened in the administrative District	A rather vague definition of habitats falling below county significance level, but which may be of greater significance than merely Local. They include sites for which Nationally Scarce species in the range from 1 to 4 examples are reasonably expected, but not yet necessarily recorded, sites that have 1 to 4 SPIs and sites that have an outstanding assemblage of "research only" Section 41 moths.
Local	Site with populations of invertebrates or invertebrate habitats considered scarce or rare or threatened in the affected and neighbouring Parishes (except Scotland, where the local area may best be defined as being within a radius of 5 kilometres	Habitats or species unique or of some other significance within the local area
Low significance	-	Although almost no area is completely without significance these are the areas with nothing more than expected "background" populations of common species and the occasional Nationally Scarce.

Source: Collin Plant Associates

By using Colin Plant Associates (UK Consultant Entomologists) guidelines (Table 8) for assessing the site significance of invertebrate habitat, Broomscot Common would rank as being of high County significance, and Scarfe Meadows as being of Local significance.

Broomscot Common clearly supports a significant breck invertebrate assemblage (particularly with regard to the number of species with conservation status), but because it is in the same geographical area as the nearby breckland region of East Anglia and other areas of 'breck' integrity such as the region between the breckland proper and the north-west Norfolk coast, the site becomes much less significant in context. For this reason, I have hesitation in assigning **Regional** significance to the site.

7 Discussion and Recommendations

Scarfe Meadows

Discussion: The site is dominated by pasture grassland that is somewhat unremarkable in terms of its floristic diversity and therefore we could expect its phytophagous invertebrate fauna to be similarly unexceptional, although the weevil *Gymnetron rostellum* which probably feeds on speedwells and is rarely recorded in Norfolk, is a significant species here. Also noteworthy and equally scarce is the rove beetle *Alaobia scapularis* which parasitises glow worms. The hedgerows produced a small number of significant saproxylic species, not least the wood-boring beetle *Hadrobregmus*

denticollis along the northern perimeter hedge which was perhaps the best example of hedgerow habitat on the site. The three large standing trees and the old hawthorn in the south pastures also add interest and significance to the dead wood invertebrate fauna here.

However, Scarfe is undoubtedly most important for its wetland assemblages, even though its truly aquatic invertebrates are standard fare, at least as recorded in this survey. Of particular interest are the seasonal draw down mud zone habitats of the north-south aligned ditch that bisects the south pastures, the broad margin of tall emergents that flank the main ditch that runs west to east across the site, also lined by willows and alders, and the *Juncus*-dominated inundation in the north pasture, much loved by wintering snipe. Between them, these habitats support an assemblage of noteworthy species, amongst them the wolf spider *Pardosa tenuipes,* the semi-aquatic ground beetle *Oodes helopioides,* the water scavenger beetles *Cercyon granarius* and *Enochrus nigritus,* the rove beetle *Atheta basicornis,* the leafhopper *Stenocranus fuscovittatus,* the plant bug *Capsus wagneri,* the silver colonel *Odontomyia argentata* and the narrow-winged horsefly *Tabanus maculicornis.* With the exception of the water scavenger beetles and *Oodes,* these species are all more-or-less infrequent in Norfolk.

Recommendations: Obvious potential lies in re-establishing the old ditches that historically connected to the north-south aligned ditch that bisects the south meadow. These can be seen in Fig. 1 as traces of greener vegetation running perpendicular to the existing ditch and coursing east across the south-east pasture. They are currently represented by shallow depressions containing vegetation indicative of seasonal inundation. The capacity for these to hold water and the effects on the resulting water levels in the ditch system here are unpredictable, but it would be worth opening at least one of these channels up and monitoring the effects.

A number of relatively mature ash trees on site may in future succumb to dieback *Hymenoscyphus fraxineus.* These trees and diseased branches etc should be left in-situ as much as is possible without recourse to felling, except where there is a risk of injury, for example where the trees overhang the public footpath along the north hedgerow.

The 2022 survey found a fairly healthy dung assemblage on site. This was mainly sampled by pitfall traps deliberately placed at the edges of cattle dung on the south-west meadow during one trapping session. Direct sampling of the dung was less productive though, particularly earlier in the season and did raise the question as to whether the cattle had been treated with a nematicide around that time. It is good practice to avoid the use of endectocides as prophylactic treatments on nature reserves. In cases where intervention **is** required, then livestock should be treated off site and only returned once treatment has run its course and the chemicals have degraded.

On one of the visits, a tractor was on site in the south-west pasture, mowing the grassland. Whilst this is not necessarily a bad idea immediately outside of the grazing season in autumn, the timing of this operation, when grassland plants were still flowering and setting seed was ill-advised. If such operations are carried out, the timing should coincide with the end of the flowering season.

Broomscot Common

Discussion: Broomscot Common shares a similar number of scarce invertebrates associated with grassland and scrub habitats, as Scarfe Meadows. It also supports a similar number of scarce dead wood species. At Broomscot these are more oriented towards oak decay and include the false darkling beetle *Abdera biflexuosa,* the narrow-waisted bark beetle *Lissodema denticolle* and the false flower beetle *Anaspis thoracica.* Broomscot has a good number of oak trees along its site boundaries (whereas only one tree was noted at Scarfe Common), hence the presence at Broomscot, and the absence at Scarfe, of scarce oak foliage feeders such as the weevils *Coleiodes ruber* and *C. transversealbofasciatus.*

Where Broomscot Common excels is in its breck habitat which occupies approximately 60-70% of the site's land area. The list of Nationally scarce and rare breck species is impressive and would suggest to the uninitiated, that this site was firmly entrenched in the heart of the East Anglian breckland. Amongst other notables, the assemblage includes the ground spider *Zelotes electus,* the ground beetles *Amara lucida, Harpalus anxius* and *H. smaragdinus,* the weevils *Brachypera dauci* and *Glocianus pilosellus,* the shining flower beetles *Olibrus millefolii* and *O. pygmaeus,* the rove beetle *Oxypoda lurida*, the lesser-streaked shieldbug *Odontoscelis lineola,* Fallen's leatherbug *Arenocoris falleni,* the groundbugs *Megalonotus praetextatus* and *M. sabulicola* and the bronze mirror clown *Saprinus aeneus* and coastal clown *Saprinus planiusculus.* The gorse scrub bordering the heath supports Gorse knot-horn moth *Pempelia genistella.*

Recommendations: The dipping pond became contaminated by New Zealand pygmyweed *Crassula helmsii* in 2022. The plant is most likely to have been introduced by people, dogs or wildfowl. The outbreak was quickly controlled by the use of fencing and public information, and no evidence of the invader could be seen on the earliest September visit. However, the likelihood that it returns is high, so it may be necessary to protect the pond indefinitely. Certainly vigilance is all-important.

The site is popular with dog-walkers which has led to an increasing amount of fouling. Dog faeces is broken down to some extent by invertebrate dung assemblages, and indeed, its presence might actually enhance the biodiversity of this fauna at the site. However, the negative effects of fouling are that in the long-term, it can increase soil nutrient levels to the point where the ground flora of the breck heath is compromised. Quite how this sensitive issue is dealt with is beyond the scope of this report. Options might include monitoring the situation and possibly installing a notice at the entrance to the reserve or in the car parking areas explaining the potential impacts on the reserve and asking people to pick up and remove the dung.

There is a possibility that gorse encroachment could become a problem. However, the heath exists in its present state due in no small part to grazing and excavation by the resident rabbit population, for which the gorse scrub offers refuge from the ever present disturbance that the heath receives from dogs and people. If gorse is to be removed, a balance would need to be sought to maximise the extent of the short turf habitat whilst maintaining its habitat integrity.

Some careful, selective removal of willow in the carr area in the north-west section of the site might be beneficial to open up the inundation here and prevent the area from drying out. Desmoulin's whorl snail *Vertigo moulinsiana* was found here on previous surveys and although unlikely, it may persist.

The vegetation heaps that have been (?annually) deposited along the north edge of the fen have been shown in previous years to be important wintering sites for invertebrates, particularly those associated with the adjacent wetland habitat. In 2022, the heaps had dried out as a result of the drought. If future summers are likely to be subject to similar drought conditions, it would be desirable to re-establish these heaps where the ground remains more-or-less saturated throughout the year, yet without compromising nutrient levels in the adjacent fen.

The rabbit-grazed grassland that was once a football pitch, to the north of the main site lies outside of the study area, but casual investigation of this habitat on the walk from the site to the car park, showed it to be floristically diverse and to be supporting at least two Nationally scarce species; Dalman's Leatherbug and the weevil *Mogulones geographicus.* The habitat is rapidly becoming a good example of breck heath and with conservation management, could be regarded as a significant extension of Broomscot Common.

Recommendations for Future Invertebrate Sampling

Baseline invertebrate surveys could be carried out on other LOHP sites for which invertebrate data is entirely lacking or is deficient for informing management proposals. This could include a baseline survey of the Broomscot Common 'football pitch.'

Now that an exhaustive baseline survey has been carried out at the LOHP Scarfe Meadows and Broomscot Common sites, future sampling using standardised methodologies could be employed on site to sample future-created habitats or managed *vs* unmanaged areas within the same site.

The baseline survey has identified assemblages and specific Nationally Rare and IUCN-threatened taxa which may make suitable subjects for future targeted research.

8 References

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Appendix: Species List

The vernacular names have been taken from a number of different literature and internet sources, as well as from 'MapMate'.
Species name entries in italics relate to indeterminate species, species complexes, unresolved species identifications *etc.*
A 'YES' in the 'voucher retained?' column indicates that a voucher specimen has been retained (usually by Steve Lane, but occasionally this may have been donated to another person)
Nationally Rare (Red Data Book), Nationally Scarce (NS, Na/Nb Notable) and IUCN threat-designated species are highlighted in yellow.
For definitions of British Rarity codes, see section 6.1.1
IUCN Status column; for interpretation see e.g. Lane (2019).
Status column: National Statuses in brackets are those for which the true status of that species has changed since designation, and is no longer valid *e.g.* the species is not currently considered to be Nationally Rare or Nationally Scarce and is awaiting re-evaluation.

Associated Habitat Codes Key:
'a' = aquatic species
'g' = grassland/verge species
'h' = short turf lichen heath/breck habitat species
's' = woodland and hedgerow species, including saproxylics
'w' = wetland species, including wet woodland and wet grassland taxa

The 'Association' column lists the main plant associations where these are known and are few, and also dung, carrion etc. If the cell is left blank it may indicate that a phytophagous species is polyphagous or that a species is predatory.

Site Code Key:
'A' = Scarfe Meadows
'B' = Broomscot Common
'D1' = Scarfe Meadows 'Ditch 1'
'D2' = Scarfe Meadows 'Ditch 2'
'I' = Scarfe Meadows north field inundation (or willow carr inundation when prefixed by 'B')
'P1' = Broomscot Common, main dipping Pond
'P2' = Broomscot Common pond in ne corner of site
'ditch' = Broomscot Common ditch in north section of site

Months - number refers to number of month e.g. '4' = April, '11' = November

The Table includes data gathered prior to the 2022 survey, although each instance is not specifically indicated in the collated data.

A datasheet of raw data has been given to Rowena Langston (LOHP) along with this report

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Amphipoda	Crangonyctidae	*Crangonyx pseudogracilis/floridanus*					a		A (I)	4
Amphipoda	Gammaridae	Gammarus pulex		none			a		A (D1D2)	4
Araneae – SPIDERS	Agelenidae – Funnelweb Spiders	Agelena labyrinthica	Labyrinth Spider	none	Least Concern		h		A	7
Araneae	Araneidae – Orbweb Spiders	Araneus diadematus	Garden Orb-Web Spider	none	Least Concern				AB	9,10
Araneae	Araneidae	Araneus marmoreus		none	Least Concern				AB	7,10
Araneae	Araneidae	Araneus triguttatus		none	Least Concern		s		AB	4
Araneae	Araneidae	Araniella opisthographa		none	Least Concern				B	6
Araneae	Araneidae	Hypsosinga albovittata		Nationally Scarce	Least Concern		h		B	5
Araneae	Araneidae	Larinioides cornutus		none	Least Concern		g		B	6
Araneae	Araneidae	Mangora acalypha		none	Least Concern				AB	6
Araneae	Araneidae	Nuctenea umbratica	Walnut Orbweb Spider	none	Least Concern		s		AB	467
Araneae	Clubionidae – Sac Spiders	Clubiona corticalis		none	Least Concern		s		A	6
Araneae	Clubionidae	Clubiona stagnatilis		none	Least Concern		w		A	4
Araneae	Clubionidae	Clubiona subtilis		none	Least Concern		w		B	4
Araneae	Dictynidae – Meshweb Spiders	Dictyna uncinata		none	Least Concern		s		A	6
Araneae	Dysderidae – Woodlouse Spiders	Harpactea hombergi		none	Least Concern		s		B	7
Araneae	Gnaphosidae – Ground Spiders	Drassyllus pusillus		none	Least Concern		g		B	56
Araneae	Gnaphosidae	Haplodrassus signifer		none	Least Concern		g		B	456
Araneae	Gnaphosidae	Micaria pulicaria sensu stricto		none	Least Concern		h		B	5
Araneae	Gnaphosidae	Zelotes electus		Nationally Scarce	Least Concern		h		B	56

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Araneae	Linyphiidae – Money Spiders	Centromerita bicolor		none	Least Concern		g		A	11
Araneae	Linyphiidae	Erigone atra		none	Least Concern				AB	467
Araneae	Linyphiidae	Erigone dentipalpis		none	Least Concern				AB	46
Araneae	Linyphiidae	Gnathonarium dentatum		none	Least Concern		w		A	46
Araneae	Linyphiidae	Hylyphantes graminicola		none	Least Concern				A	6
Araneae	Linyphiidae	Hypomma bituberculatum		none	Least Concern		w		A	4
Araneae	Linyphiidae	Leptorhoptrum robustum		none	Least Concern		w		A	46
Araneae	Linyphiidae	Lophomma punctatum		none	Least Concern		w		A	4
Araneae	Linyphiidae	Oedothorax agrestis		none	Least Concern		w		A	11
Araneae	Linyphiidae	Oedothorax fuscus		none	Least Concern		g		A	69
Araneae	Linyphiidae	Oedothorax gibbosus		none	Least Concern		w		AB	56
Araneae	Linyphiidae	Oedothorax retusus		none	Least Concern		g		AB	456
Araneae	Linyphiidae	Pelecopsis parallela		none	Least Concern				B	5
Araneae	Linyphiidae	Savignia frontata		none	Least Concern				A	4
Araneae	Linyphiidae	Tenuiphantes tenuis		none	Least Concern				B	6
Araneae	Linyphiidae	Walckenaeria nudipalpis		none	Least Concern				B	11
Araneae	Lycosidae – Wolf Spiders	Alopecosa barbipes		none	Least Concern		h		B	6
Araneae	Lycosidae	Alopecosa pulverulenta		none	Least Concern		g		AB	45
Araneae	Lycosidae	Arctosa leopardus		none	Least Concern		w		AB	456
Araneae	Lycosidae	Pardosa amentata		none	Least Concern				AB	456
Araneae	Lycosidae	Pardosa monticola		none	Least Concern		h		B	56
Araneae	Lycosidae	Pardosa palustris		none	Least Concern		g		A	46
Araneae	Lycosidae	Pardosa prativaga		none	Least Concern				AB	456
Araneae	Lycosidae	Pardosa pullata		none	Least Concern				AB	4567

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Araneae	Lycosidae	Pardosa tenuipes		Nationally Scarce	Least Concern		w		A	46
Araneae	Lycosidae	Pirata piraticus		none	Least Concern		w		AB	56
Araneae	Lycosidae	Piratula hygrophila		none	Least Concern		w		AB	567
Araneae	Lycosidae	Piratula latitans		none	Least Concern		w		AB	567
Araneae	Lycosidae	Trochosa ruricola		none	Least Concern		w		A	46
Araneae	Philodromidae – Running Crab Spiders	Philodromus aureolus		none	Least Concern		s		A	6
Araneae	Philodromidae	Philodromus cespitum		none	Least Concern				A	6
Araneae	Philodromidae	Philodromus dispar		none	Least Concern		s		B	6
Araneae	Philodromidae	Tibellus oblongus		none	Least Concern		g		B	6
Araneae	Phrurolithidae – Running Foliage Spiders	Agroeca brunnea		none	Least Concern		s		B	11
Araneae	Pisauridae – Nurseryweb Spiders	Pisaura mirabilis	Nurseryweb Spider	none	Least Concern				AB	4910,11
Araneae	Salticidae – Jumping Spiders	Heliophanus flavipes		none	Least Concern				B	6
Araneae	Salticidae	Marpissa muscosa		Nationally Scarce	Least Concern		s (gate)		A	469,10
Araneae	Salticidae	Salticus scenicus	Common Zebra Spider	none	Least Concern				A	4
Araneae	Tetragnathidae – Long-jawed Orbweb Spiders	Pachygnatha clercki		none	Least Concern		w		AB	4569
Araneae	Tetragnathidae	Pachygnatha degeeri		none	Least Concern				AB	4567
Araneae	Tetragnathidae	Tetragnatha extensa	Common Stretch Spider	none	Least Concern		w		A	7
Araneae	Tetragnathidae	Tetragnatha montana		none	Least Concern		w		A	6
Araneae	Tetragnathidae	Tetragnatha nigrita		none	Least Concern				A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Araneae	Theridiidae – Comb-footed Spiders	Asagena phalerata		none	Least Concern		h		B	56
Araneae	Theridiidae	Enoplognatha latimana	Scarce Candy-striped Spider	none	Least Concern				AB	7
Araneae	Theridiidae	Robertus lividus		none	Least Concern				AB	11
Araneae	Thomisidae – Crab Spiders	Ozyptila brevipes		none	Least Concern		w		B	11
Araneae	Thomisidae	Xysticus cristatus		none	Least Concern				AB	45
Araneae	Thomisidae	Xysticus kochi		none	Least Concern		h		AB	456
Araneae	Thomisidae	Xysticus ulmi		none	Least Concern		w		A	6
Arhynchobdellida – LEECHES	Erpobdellidae	*Erpobdella sp*					a		B(P2)	4
Arhynchopdellida	Erpobdellidae	Erpobdella octoculata		none			a		A(D1)	4
Arhynchobdellida	Haemopidae	Haemopis sanguisuga	Horse Leech	none			a		A(D2)	9
Coleoptera – BEETLES	Anthicidae – Ant Beetles	Anthicus antherinus		none	Least Concern		g		AB	7,10,11
Coleoptera	Anthicidae	Notoxus monoceros	Monoceros Beetle	none	Least Concern		h		A	6
Coleoptera	Anthicidae	Omonadus formicarius		none	Least Concern			decaying vegetation heaps	B	7
Coleoptera	Anthribidae – Fungus Weevils	Platystomos albinus		Nationally Scarce (Notable B)	not yet evaluated		s	Fungus-infected trees	A	6
Coleoptera	Apionidae – Seed Weevils	Apion cruentatum		none	not yet evaluated	YES	g	common sorrel	B	6
Coleoptera	Apionidae	Apion frumentarium		none	not yet evaluated			docks	AB	69
Coleoptera	Apionidae	Apion haematodes		none	not yet evaluated		h	sheep's sorrel	B	67
Coleoptera	Apionidae	Ceratapion carduorum		none	not yet evaluated		g	spear thistle	A	7
Coleoptera	Apionidae	Ceratapion gibbirostre		none	not yet evaluated		g	thistles	A	4
Coleoptera	Apionidae	Ceratapion onopordi		none	not yet evaluated		g	thistles	AB	9
Coleoptera	Apionidae	Eutrichapion ervi		none	not yet evaluated		g	vetches	B	69,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Apionidae	Eutrichapion viciae		none	not yet evaluated		g	vetches	B	7
Coleoptera	Apionidae	Eutrichapion vorax		none	not yet evaluated		s	vetches	A	4
Coleoptera	Apionidae	Exapion ulicis	Gorse Weevil	none	not yet evaluated		h	gorse	B	47,10
Coleoptera	Apionidae	Holotrichapion pisi		none	not yet evaluated		g	*Medicago*	B	9
Coleoptera	Apionidae	Ischnopterapion modestum		none	not yet evaluated		w	greater bird's-trefoil	B	9
Coleoptera	Apionidae	Melanapion minimum		Nationally Rare (Red Data Book 3)	not yet evaluated		w	willows	A	6
Coleoptera	Apionidae	Perapion curtirostre		none	not yet evaluated		h	sheep's sorrel	B	6
Coleoptera	Apionidae	Perapion hydrolapathi		none	not yet evaluated		g	docks	A	47
Coleoptera	Apionidae	Pirapion immune		none	not yet evaluated		h	broom	B	6
Coleoptera	Apionidae	Protapion apricans		none	not yet evaluated		g	red clover	AB	6
Coleoptera	Apionidae	Protapion assimile		none	not yet evaluated		g	clovers	B	6
Coleoptera	Apionidae	Protapion fulvipes	White Clover Seed Weevil	none	not yet evaluated		g	white clover, alsike clover	B	5
Coleoptera	Apionidae	Protapion nigritarse		none	not yet evaluated		g	clovers	B	10
Coleoptera	Apionidae	Protapion trifolii		none	not yet evaluated		g	clovers	A	6
Coleoptera	Buprestidae – Jewel Beetles	Agrilus sinuatus	Hawthorn Jewel Beetle	none	Least Concern		s	hawthorn	AB	4 (exit holes)
Coleoptera	Cantharidae – Soldier Beetles	Cantharis cryptica		none	Least Concern				AB	6
Coleoptera	Cantharidae	Cantharis decipiens		none	Least Concern		s		B	4
Coleoptera	Cantharidae	Cantharis flavilabris		none	Least Concern		g		AB	67
Coleoptera	Cantharidae	Cantharis fusca		Nationally Scarce	Least Concern	YES	w		A	6
Coleoptera	Cantharidae	Cantharis lateralis		none	Least Concern		g		AB	67
Coleoptera	Cantharidae	Cantharis livida		none	Least Concern				A	6
Coleoptera	Cantharidae	Cantharis nigra (was		none	Least Concern		w		A	67

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
		thoracica)								
Coleoptera	Cantharidae	Cantharis nigricans		none	Least Concern				A	6
Coleoptera	Cantharidae	Cantharis pallida		none	Least Concern		w		AB	67
Coleoptera	Cantharidae	Cantharis pellucida		none	Least Concern		s		A	6
Coleoptera	Cantharidae	Cantharis rufa		none	Least Concern		g		B	6
Coleoptera	Cantharidae	Cantharis rustica		none	Least Concern		g		A	6
Coleoptera	Cantharidae	Malthinus flaveolus		none	Least Concern		s		A	7
Coleoptera	Cantharidae	Malthinus seriepunctatus		none	Least Concern		s		B	6
Coleoptera	Cantharidae	Malthodes marginatus		none	Least Concern		s		A	6
Coleoptera	Cantharidae	Rhagonycha fulva	Common Red Soldier Beetle	none	Least Concern		g		AB	67
Coleoptera	Cantharidae	Rhagonycha lutea		Nationally Scarce	Least Concern		s		A	6
Coleoptera	Cantharidae	Rhagonycha nigriventris		none	Least Concern				A	6
Coleoptera	Cantharidae	Rhagonycha testacea		none	Least Concern		w		B	6
Coleoptera	Carabidae – Ground Beetles	Acupalpus dubius		none	Least Concern		w		AB	467,10,11
Coleoptera	Carabidae	Acupalpus parvulus		none	Least Concern		w		B	7
Coleoptera	Carabidae	Agonum emarginatum		none	Least Concern	YES	w		AB	4567,11
Coleoptera	Carabidae	Agonum fuliginosum		none	Least Concern		w		AB	4679,11
Coleoptera	Carabidae	Agonum marginatum		none	Least Concern		w		A	4
Coleoptera	Carabidae	Agonum thoreyi		none	Least Concern		w		AB	6,10
Coleoptera	Carabidae	Agonum viduum		none	Least Concern	YES	w		AB	4567,11
Coleoptera	Carabidae	Amara aenea	Common Sun Beetle	none	Least Concern	YES	h		B	4567
Coleoptera	Carabidae	Amara apricaria		none	Least Concern		h		AB	67
Coleoptera	Carabidae	Amara bifrons		none	Least Concern		h		B	7
Coleoptera	Carabidae	Amara communis		none	Least Concern		g		A	46,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Carabidae	Amara convexior		none	Least Concern		h		B	7
Coleoptera	Carabidae	Amara familiaris		none	Least Concern		g		B	4
Coleoptera	Carabidae	Amara lucida		Nationally Scarce	Least Concern		h		B	567
Coleoptera	Carabidae	Amara lunicollis		none	Least Concern		g		AB	56,11
Coleoptera	Carabidae	Amara montivaga		Nationally Scarce	Least Concern		h		B	6
Coleoptera	Carabidae	Amara ovata		none	Least Concern		g		B	57
Coleoptera	Carabidae	Amara plebeja		none	Least Concern				AB	46
Coleoptera	Carabidae	Amara similata		none	Least Concern		g		AB	456,11
Coleoptera	Carabidae	Amara tibialis		none	Least Concern		h		B	4567
Coleoptera	Carabidae	Anisodactylus binotatus		none	Least Concern		g		A	6
Coleoptera	Carabidae	Badister bullatus sens. lat.		none	Least Concern				A	11
Coleoptera	Carabidae	Bembidion assimile		none	Least Concern		w		AB	467
Coleoptera	Carabidae	Bembidion biguttatum		none	Least Concern		w		AB	46,11
Coleoptera	Carabidae	Bembidion clarkii		none	Least Concern		w		AB	46,11
Coleoptera	Carabidae	Bembidion genei		none	Least Concern		w		AB	4
Coleoptera	Carabidae	Bembidion guttula		none	Least Concern				A	46
Coleoptera	Carabidae	Bembidion lampros		none	Least Concern				A	6,11
Coleoptera	Carabidae	Bembidion lunulatum		none	Least Concern	YES	w		AB	4567,10
Coleoptera	Carabidae	Bembidion mannerheimii		none	Least Concern				AB	11
Coleoptera	Carabidae	Bembidion obtusum		none	Least Concern	YES	g		A	6
Coleoptera	Carabidae	Bembidion properans		none	Least Concern		g		A	469
Coleoptera	Carabidae	Bradycellus harpalinus		none	Least Concern		g		AB	4,11
Coleoptera	Carabidae	Bradycellus verbasci		none	Least Concern		g		AB	7,11
Coleoptera	Carabidae	Calathus cinctus		none	Least Concern		h		B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Carabidae	Calathus fuscipes		none	Least Concern		g		AB	5679,11
Coleoptera	Carabidae	Calathus melanocephalus		none	Least Concern		g		A	9
Coleoptera	Carabidae	Calodromius spilotus		none	Least Concern		s		AB	467,10
Coleoptera	Carabidae	Carabus granulatus		none	Least Concern		w		A	46
Coleoptera	Carabidae	Carabus problematicus		none	Least Concern				B	7
Coleoptera	Carabidae	Chlaenius nigricornis		none	Least Concern		w		AB	467
Coleoptera	Carabidae	Clivina fossor		none	Least Concern				A	46
Coleoptera	Carabidae	Curtonotus aulicus		none	Least Concern		g	thistles	B	11
Coleoptera	Carabidae	Demetrias atricapillus		none	Least Concern		g		AB	47,10,11
Coleoptera	Carabidae	Demetrias imperialis		none	Least Concern		w	*Phragmites beds*	A	47
Coleoptera	Carabidae	Dicheirotrichus placidus		none	Least Concern		w		A	4,11
Coleoptera	Carabidae	Dromius quadrimaculatus		none	Least Concern		s		B	467
Coleoptera	Carabidae	Dyschirius aeneus		none	Least Concern		w		A	6
Coleoptera	Carabidae	Elaphrus cupreus		none	Least Concern		w		AB	45
Coleoptera	Carabidae	Elaphrus riparius		none	Least Concern		w		AB	4
Coleoptera	Carabidae	Harpalus affinis		none	Least Concern		g/h		B	567
Coleoptera	Carabidae	Harpalus anxius		Nationally Scarce	Least Concern		h		B	567
Coleoptera	Carabidae	Harpalus rubripes		none	Least Concern		h		B	567
Coleoptera	Carabidae	Harpalus rufipes	Strawberry Seed Beetle	none	Least Concern		g		AB	67
Coleoptera	Carabidae	Harpalus smaragdinus		Nationally Scarce	Least Concern		h		B	6
Coleoptera	Carabidae	Harpalus tardus		none	Least Concern		h		B	567,10
Coleoptera	Carabidae	Leistus ferrugineus		none	Least Concern				B	10
Coleoptera	Carabidae	Loricera pilicornis		none	Least Concern				AB	467
Coleoptera	Carabidae	Nebria brevicollis		none	Least Concern				AB	46,10

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Carabidae	Nebria salina		none	Least Concern		h		B	5
Coleoptera	Carabidae	Notiophilus biguttatus		none	Least Concern				AB	47,11
Coleoptera	Carabidae	Notiophilus palustris		none	Least Concern				B	11
Coleoptera	Carabidae	Notiophilus substriatus		none	Least Concern		h		AB	46
Coleoptera	Carabidae	Oodes helopioides		Nationally Scarce	Least Concern		w		A	46
Coleoptera	Carabidae	Ophonus ardosiacus		none	Least Concern		h		A	7
Coleoptera	Carabidae	Ophonus puncticeps		none	Least Concern		h		B	7
Coleoptera	Carabidae	Ophonus rufibarbis		none	Least Concern		g		B	7
Coleoptera	Carabidae	Oxypselaphus obscurus		none	Least Concern				AB	11
Coleoptera	Carabidae	Paradromius linearis		none	Least Concern		g		AB	49,10
Coleoptera	Carabidae	Paranchus albipes		none	Least Concern		w		A	4
Coleoptera	Carabidae	Philorhizus melanocephalus		none	Least Concern		g		B	6,11
Coleoptera	Carabidae	Poecilus cupreus		none	Least Concern		g		A	469
Coleoptera	Carabidae	Poecilus versicolor		none	Least Concern		g		A	469
Coleoptera	Carabidae	Pterostichus diligens		none	Least Concern		w		AB	11
Coleoptera	Carabidae	Pterostichus gracilis		Nationally Scarce	Least Concern		w		A	46
Coleoptera	Carabidae	Pterostichus madidus	Black Clock	none	Least Concern				AB	67
Coleoptera	Carabidae	Pterostichus melanarius		none	Least Concern		g		A	69
Coleoptera	Carabidae	Pterostichus minor		none	Least Concern		w		AB	4579,11
Coleoptera	Carabidae	Pterostichus niger		none	Least Concern				AB	679
Coleoptera	Carabidae	Pterostichus nigrita		none	Least Concern		w		AB	4679,10
Coleoptera	Carabidae	Pterostichus rhaeticus		none	Least Concern		w		B	57
Coleoptera	Carabidae	Pterostichus strenuus		none	Least Concern				AB	47,11
Coleoptera	Carabidae	Pterostichus vernalis		none	Least Concern				AB	467,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Carabidae	Stenolophus mixtus		none	Least Concern		w		B	7
Coleoptera	Carabidae	Stenolophus skrimshiranus		Nationally Scarce	Least Concern	YES	w		AB	46
Coleoptera	Carabidae	Stenolophus teutonus		[Nationally Scarce]	Least Concern		w		AB	6,11
Coleoptera	Carabidae	Syntomus foveatus		none	Least Concern	YES	h		B	4567,10
Coleoptera	Carabidae	Syntomus truncatellus		Nationally Scarce	Least Concern	YES	g		A	6,11
Coleoptera	Carabidae	Trechus quadristriatus		none	Least Concern				B	7,10
Coleoptera	Cerambycidae – Longhorn Beetles	Agapanthia villosoviridescens	Golden-bloomed Grey Longhorn	none	Least Concern		g	umbellifers	A	6
Coleoptera	Cerambycidae	Grammoptera ruficornis	Common Grammoptera	none	Least Concern		s	dead wood	A	46
Coleoptera	Cerambycidae	Leiopus linnei		none	Least Concern		s	dead wood	A	6
Coleoptera	Cerambycidae	Pogonocherus hispidus	Lesser Thorn-tipped Longhorn Beetle	none	Least Concern		s	dead wood	A	4
Coleoptera	Cerambycidae	Pseudovadonia livida	Fairy-ring Longhorn Beetle	none	Least Concern		g	*Marasmius oreades*	B	6
Coleoptera	Cerambycidae	Rutpela maculata	Black and Yellow Longhorn	none	Least Concern		s	dead wood	A	67
Coleoptera	Cerambycidae	Stenocorus meridianus	Variable Longhorn	none	Least Concern		s	tree roots	B	6
Coleoptera	Chrysomelidae – Leaf Beetles	Altica lythri		none	Least Concern		w	willowherbs (usually greater)	AB	4567,11
Coleoptera	Chrysomelidae	Altica palustris		none	Least Concern			willowherbs	B	11
Coleoptera	Chrysomelidae	Aphthona euphorbiae	Large Flax Flea Beetle	none	Least Concern				AB	4567
Coleoptera	Chrysomelidae	Aphthona nonstriata	Iris Flea Beetle	none	Least Concern		w	yellow flag	A	46
Coleoptera	Chrysomelidae	Bruchidius varius		none	Least Concern		g	red clover	AB	4679
Coleoptera	Chrysomelidae	Bruchus rufimanus	Bean Seed Beetle	none	Least Concern			Fabaceae	AB	479
Coleoptera	Chrysomelidae	Cassida prasina		Nationally Scarce	Least Concern		g	yarrow	B	47

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Chrysomelidae	Cassida rubiginosa	Thistle Tortoise Beetle	none	Least Concern		g	thistles	AB	4679
Coleoptera	Chrysomelidae	Cassida vibex		none	Least Concern		g	knapweeds, thistles	B	10
Coleoptera	Chrysomelidae	Chaetocnema concinna	Mangold Flea Beetle	none	Least Concern			Polygonaceae	AB	4
Coleoptera	Chrysomelidae	Chaetocnema hortensis		none	Least Concern			Poaceae	AB	456,11
Coleoptera	Chrysomelidae	Chaetocnema picipes		none	Least Concern			Polygonaceae	B	5
Coleoptera	Chrysomelidae	Chrysolina hyperici		none	Least Concern		g/h	St John's-wort	B	5
Coleoptera	Chrysomelidae	Chrysolina polita		none	Least Concern			ground ivy/mints	A	6
Coleoptera	Chrysomelidae	Crepidodera aurata	Willow Flea Beetle	none	Least Concern			willows	A	69
Coleoptera	Chrysomelidae	Crepidodera fulvicornis		none	Least Concern			willows	B	4
Coleoptera	Chrysomelidae	Crepidodera plutus		none	Least Concern			willows	A	479
Coleoptera	Chrysomelidae	Cryptocephalus fulvus		none	Least Concern	YES	h	sheep's sorrel, St John's-wort	B	67
Coleoptera	Chrysomelidae	Cryptocephalus pusillus		none	Least Concern		s		B	7
Coleoptera	Chrysomelidae	Donacia marginata		none	Least Concern		w/a	*Sparganium*	B	6
Coleoptera	Chrysomelidae	Donacia simplex		none	Least Concern		w/a	Bur-reeds	A(D1D2)	467
Coleoptera	Chrysomelidae	Epitrix pubescens		none	Least Concern			woody nightshade	AB	679
Coleoptera	Chrysomelidae	Galeruca tanaceti		none	Least Concern		g/h		B	6
Coleoptera	Chrysomelidae	Gastrophysa polygoni		none	Least Concern		g	knotgrass and other Polygonaceae	B	4
Coleoptera	Chrysomelidae	Lochmaea caprea	Willow Leaf Beetle	none	Least Concern		s	willows, birches	B	4
Coleoptera	Chrysomelidae	Lochmaea crataegi	Hawthorn Leaf Beetle	none	Least Concern		s	hawthorn	AB	4
Coleoptera	Chrysomelidae	Longitarsus flavicornis		none	Least Concern		g	ragwort	B	479
Coleoptera	Chrysomelidae	Longitarsus luridus		none	Least Concern		g	various, but often Ranunculus	AB	45

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Chrysomelidae	Longitarsus parvulus	Flax Flea Beetle	none	Least Concern			various	AB	469,10
Coleoptera	Chrysomelidae	Longitarsus rubiginosus		none	Least Concern			*Calystegia mainly*	A	89
Coleoptera	Chrysomelidae	Neocrepidodera transversa		none	Least Concern				AB	67
Coleoptera	Chrysomelidae	Oulema melanopus sens. str.		none	Least Concern		g	Poaceae	AB	49,11
Coleoptera	Chrysomelidae	Phaedon armoraciae		none	Least Concern		w	wetland crucifers	B	6
Coleoptera	Chrysomelidae	Phaedon cochleariae		none	Least Concern		w	wetland crucifers (mainly)	B	49
Coleoptera	Chrysomelidae	Phaedon tumidulus	Celery Leaf Beetle	none	Least Concern		g	cow parsley, hogweed	B	10,11
Coleoptera	Chrysomelidae	Phratora vitellinae	Brassy Willow Beetle	none	Least Concern			willows, aspens, poplars	A	9
Coleoptera	Chrysomelidae	Phyllotreta nigripes		none	Least Concern		g	Brassicaceae	AB	49
Coleoptera	Chrysomelidae	Phyllotreta undulata	Small Striped Flea Beetle	none	Least Concern			Brassicaceae	AB	4,10
Coleoptera	Chrysomelidae	Phyllotreta vittula	Barley Flea Beetle	none	Least Concern			Brassicaceae and Poaceae	AB	47
Coleoptera	Chrysomelidae	Plagiodera versicolora		none	Least Concern		w	willows	AB	46
Coleoptera	Chrysomelidae	Psylliodes affinis	Potato Flea Beetle	none	Least Concern			woody nightshade	AB	467
Coleoptera	Chrysomelidae	Psylliodes chrysocephala	Cabbage-stem Flea Beetle	none	Least Concern			Brassicaceae	AB	469,10
Coleoptera	Chrysomelidae	Psylliodes dulcamarae		none	Least Concern			woody nightshade	A	4
Coleoptera	Chrysomelidae	Sphaeroderma testaceum		none	Least Concern			thistles	AB	79
Coleoptera	Ciidae – Minute Tree-fungus Beetles	Cis boleti		none	not yet evaluated		s	fungoid dead wood	B	10
Coleoptera	Cleridae – Checkered Beetles	Necrobia violacea		none	not yet evaluated			carrion	B	6
Coleoptera	Coccinellidae – Ladybirds	Adalia decempunctata	10-spot Ladybird	none	not yet evaluated		s		AB	467
Coleoptera	Coccinellidae	Anisosticta novemdecimpunctata	Water Ladybird	none	not yet evaluated		w		A	47

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Coccinellidae	Calvia quattuordecimguttata	Cream-spot Ladybird	none	not yet evaluated		s		AB	467
Coleoptera	Coccinellidae	Coccidula rufa	Red Marsh Ladybird	none	not yet evaluated		w		AB	469,10,11
Coleoptera	Coccinellidae	Coccinella septempunctata	7-spot Ladybird	none	not yet evaluated				AB	4679,10
Coleoptera	Coccinellidae	Exochomus quadripustulatus	Pine Ladybird	none	not yet evaluated		s		AB	469,10
Coleoptera	Coccinellidae	Halyzia sedecimguttata	Orange Ladybird	none	not yet evaluated		s		A	67
Coleoptera	Coccinellidae	Harmonia axyridis	Harlequin Ladybird	none	not yet evaluated				AB	4679,10
Coleoptera	Coccinellidae	Hippodamia variegata	Adonis Ladybird	[Nationally Scarce (Notable B)]	not yet evaluated		h		B	7
Coleoptera	Coccinellidae	Nephus quadrimaculatus	Four-spotted Nephus	[Nationally Rare (Red Data Book 2)]	not yet evaluated		s	ivy	B	10
Coleoptera	Coccinellidae	Propylea quattuordecimpunctata	14-spot Ladybird	none	not yet evaluated				AB	4679
Coleoptera	Coccinellidae	Psyllobora vigintiduopunctata	22-spot Ladybird	none	not yet evaluated		g		A	469
Coleoptera	Coccinellidae	Rhyzobius litura	Pointed-keeled Rhyzobius	none	not yet evaluated		g		AB	49,10
Coleoptera	Coccinellidae	Scymnus frontalis	Angle-spotted Scymnus	none	not yet evaluated		h		B	6
Coleoptera	Coccinellidae	Scymnus haemorrhoidalis	Red-rumped Scymnus	none	not yet evaluated		w		A	11
Coleoptera	Coccinellidae	Subcoccinella vigintiquattuorpunctata	24-spot Ladybird	none	not yet evaluated		g		AB	4679,10,11
Coleoptera	Coccinellidae	Tytthaspis sedecimpunctata	16-spot Ladybird	none	not yet evaluated		g		A	4679,11
Coleoptera	Corylophidae – Minute Hooded Beetles	Corylophus cassidoides		none	not yet evaluated		w		A	4,11
Coleoptera	Corylophidae	Orthoperus nigrescens		[Nationally Scarce	not yet evaluated		s	dead wood	B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
				(Notable B)]						
Coleoptera	Cryptophagidae – Silken Fungus Beetles	Atomaria atricapilla		none	not yet evaluated				B	4
Coleoptera	Cryptophagidae	Atomaria basalis		none	not yet evaluated		w		B	49,10
Coleoptera	Cryptophagidae	Atomaria lewisi		none	not yet evaluated			decaying vegetation heaps	B	10
Coleoptera	Cryptophagidae	Atomaria mesomela		none	not yet evaluated		w		A	4
Coleoptera	Cryptophagidae	Atomaria scutellaris		[Nationally Rare (Red Data Book insufficiently known)]	not yet evaluated		g/h		A	4
Coleoptera	Cryptophagidae	Cryptophagus denticulatus		none	not yet evaluated	YES		decaying vegetation heaps	B	11
Coleoptera	Cryptophagidae	Cryptophagus lycoperdi		none	not yet evaluated		g	puffball fungi	B	6
Coleoptera	Cryptophagidae	Ephistemus globulus		none	not yet evaluated				B	10
Coleoptera	Cryptophagidae	Micrambe ulicis		none	not yet evaluated		h	gorse	AB	47,10
Coleoptera	Curculionidae – Weevils	Acalyptus carpini		Nationally Scarce (Notable B)	not yet evaluated		w	willows	AB	47
Coleoptera	Curculionidae	Andrion regensteinense		none	not yet evaluated		s	gorse and broom	B	46
Coleoptera	Curculionidae	Anthonomus pedicularius		none	not yet evaluated		s	hawthorn	AB	4
Coleoptera	Curculionidae	Anthonomus rubi	Strawberry Blossom Weevil	none	not yet evaluated		g	cinquefoils etc	AB	6
Coleoptera	Curculionidae	Archarius pyrrhoceras		none	not yet evaluated		s	oaks	B	4
Coleoptera	Curculionidae	Brachypera dauci		Nationally Scarce (Notable B)	not yet evaluated	YES	h	common stork's-bill	B	5
Coleoptera	Curculionidae	Ceutorhynchus inaffectatus		none	not yet evaluated	YES	g	dame's violet	A	6
Coleoptera	Curculionidae	Ceutorhynchus obstrictus		none	not yet evaluated			Brassicaceae	AB	46

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Curculionidae	Ceutorhynchus pallidactylus	Cabbage Stem Weevil	none	not yet evaluated			Brassicaceae	AB	47
Coleoptera	Curculionidae	Ceutorhynchus picitarsis		none	not yet evaluated		g	Brassicaceae	A	6
Coleoptera	Curculionidae	Ceutorhynchus pyrrhorhynchus		none	not yet evaluated		g	hedge mustard	A	6
Coleoptera	Curculionidae	Ceutorhynchus typhae		none	not yet evaluated			Brassicaceae	AB	46
Coleoptera	Curculionidae	Coeliodes ruber		Nationally Scarce (Notable B)	not yet evaluated	YES	s	oak	B	4
Coleoptera	Curculionidae	Coeliodes transversealbofasciatus		Nationally Scarce (Notable B)	not yet evaluated	YES	s	oak	B	4
Coleoptera	Curculionidae	Coelositona cambricus		none	not yet evaluated			Lotus sp	B	5
Coleoptera	Curculionidae	Curculio glandium	Acorn Weevil	none	not yet evaluated		s	oak	AB	479
Coleoptera	Curculionidae	Curculio venosus		none	not yet evaluated		s	oak	B	7
Coleoptera	Curculionidae	Datonychus melanostictus		none	not yet evaluated		w	water mint	B	10
Coleoptera	Curculionidae	Dorytomus taeniatus		none	not yet evaluated		s	willows	A	6
Coleoptera	Curculionidae	Euophryum confine		none	not yet evaluated		s	dead wood	A	6
Coleoptera	Curculionidae	Glocianus pilosellus		Nationally Rare (Red Data Book 2)	not yet evaluated	YES	h	'lesser dandelion’	B	5
Coleoptera	Curculionidae	Gymnetron rostellum		Nationally Scarce (Notable A)	not yet evaluated	YES	g/h	speedwells?	A	4
Coleoptera	Curculionidae	Hylesinus taranio		none	not yet evaluated		s	ash	A	6
Coleoptera	Curculionidae	Hypera conmaculata		none	not yet evaluated		w	fool’s watercress	B	4,10
Coleoptera	Curculionidae	Hypera rumicis		none	not yet evaluated			docks	A	6
Coleoptera	Curculionidae	Leiosoma deflexum		none	not yet evaluated			Ranunculaceae	A	4
Coleoptera	Curculionidae	Limnobaris dolorosa		none	not yet evaluated		w	sedges	B	6,11
Coleoptera	Curculionidae	Magdalis cerasi		[Nationally	not yet evaluated		s	hawthorn and	B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
				Scarce (Notable B)]				other Rosaceae		
Coleoptera	Curculionidae	Magdalis ruficornis		none	not yet evaluated	YES	s	Rosaceae shrubs	A	4
Coleoptera	Curculionidae	Nedyus quadrimaculatus	Small Nettle Weevil	none	not yet evaluated			stinging nettle	AB	46789
Coleoptera	Curculionidae	Orchestes hortorum		none	not yet evaluated		s	oak	AB	467
Coleoptera	Curculionidae	Orchestes pilosus		none	not yet evaluated		s	oak	B	4
Coleoptera	Curculionidae	Otiorhynchus ovatus		none	not yet evaluated		h		B	67
Coleoptera	Curculionidae	Otiorhynchus singularis	Raspberry Weevil	none	not yet evaluated		s		A	6
Coleoptera	Curculionidae	Parethelcus pollinarius		none	not yet evaluated			stinging nettle	AB	47,10
Coleoptera	Curculionidae	Pelenomus quadrituberculatus		none	not yet evaluated		w	Persicaria sp	A	4
Coleoptera	Curculionidae	Philopedon plagiatum	Marram Weevil	none	not yet evaluated	YES	h		B	567
Coleoptera	Curculionidae	Phloeotribus rhododactylus		none	not yet evaluated		h	broom	B	7
Coleoptera	Curculionidae	Phyllobius glaucus		none	not yet evaluated		s		A	6
Coleoptera	Curculionidae	Phyllobius maculicornis	Green Leaf Weevil	none	not yet evaluated		s		A	6
Coleoptera	Curculionidae	Phyllobius pomaceus	Nettle Weevil	none	not yet evaluated		g	stinging nettle	A	67
Coleoptera	Curculionidae	Phyllobius pyri	Common Leaf Weevil	none	not yet evaluated		s		AB	46
Coleoptera	Curculionidae	Phyllobius roboretanus	Small Green Nettle Weevil	none	not yet evaluated		g		B	6
Coleoptera	Curculionidae	Phyllobius virideaeris	Green Nettle Weevil	none	not yet evaluated		g		A	67
Coleoptera	Curculionidae	Rhamphus oxyacanthae		none	not yet evaluated		s	hawthorn	AB	7
Coleoptera	Curculionidae	Rhinocyllus conicus		[Nationally Scarce (Notable A)]	not yet evaluated		g	thistles	B	6
Coleoptera	Curculionidae	Rhinoncus castor		none	not yet evaluated		h	sheep’s sorrel	AB	4567
Coleoptera	Curculionidae	Rhinusa antirrhini		none	not yet evaluated		g	common toadflax	A	6
Coleoptera	Curculionidae	Sciaphilus asperatus	Strawberry Root	none	not yet evaluated		g		B	10

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Curculionidae	Sibinia primita	Weevil	[Nationally Scarce (Notable B)]	not yet evaluated	YES	h	*Sagina sp*	B	5
Coleoptera	Curculionidae	Sitona hispidulus		none	not yet evaluated	YES	g	Fabaceae	B	9
Coleoptera	Curculionidae	Sitona lineatus	Pea-leaf Weevil	none	not yet evaluated		g	Fabaceae	AB	4679,10,11
Coleoptera	Curculionidae	Sitona obsoletus		none	not yet evaluated		g	Fabaceae	AB	69
Coleoptera	Curculionidae	Strophosoma melanogrammum	Nut Leaf Weevil	none	not yet evaluated		s	oak, birch etc	B	46,10
Coleoptera	Curculionidae	Trachyphloeus scabriculus		none	not yet evaluated		h		B	56
Coleoptera	Curculionidae	Tychius pusillus		Nationally Scarce (Notable B)	not yet evaluated		g	*Trifolium dubium*	B	7
Coleoptera	Dermestidae – Larder Beetles, Carpet Beetles etc	Anthrenus fuscus		none	Least Concern			dried plant and animal debris	B	7
Coleoptera	Dermestidae	Anthrenus verbasci	Carpet Beetle	none	Least Concern			dried plant and animal debris	B	67
Coleoptera	Dermestidae	Ctesias serra	Cobweb Beetle	none	Least Concern	YES	s	dried debris in cobwebs	A	6
Coleoptera	Dermestidae	Dermestes murinus		Nationally Scarce	Least Concern	YES		carrion	B	5
Coleoptera	Dryopidae – Long-toed Water Beetles	Dryops ernesti		none	Least Concern		w/a		AB	4567,11
Coleoptera	Dytiscidae – Diving Beetles	Agabus bipustulatus		none	Least Concern		a		A(D1, D2,I)	469
Coleoptera	Dytiscidae	Agabus uliginosus		Nationally Scarce	Near Threatened	YES	a		B(I)	4
Coleoptera	Dytiscidae	Colymbetes fuscus		none	Least Concern		a		B(P1)	4
Coleoptera	Dytiscidae	Hydroporus angustatus		none	Least Concern		a		A(I)	47
Coleoptera	Dytiscidae	Hydroporus incognitus		none	Least Concern		a		A	9

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Dytiscidae	Hydroporus memnonius		none	Least Concern		a		A(D2)	49
Coleoptera	Dytiscidae	Hydroporus palustris		none	Least Concern		a		A(D1, D2,I)B(P1,P2)	46
Coleoptera	Dytiscidae	Hydroporus planus		none	Least Concern		a		A(D1,I)	46
Coleoptera	Dytiscidae	Hydroporus pubescens		none	Least Concern		a		A(D1)	6
Coleoptera	Dytiscidae	Hygrotus impressopunctatus		none	Least Concern		a		A(I)	4
Coleoptera	Dytiscidae	Hygrotus inaequalis		none	Least Concern		a		A(D1) B(P1)	4
Coleoptera	Dytiscidae	Hyphydrus ovatus		none	Least Concern		a		A(D1)	4
Coleoptera	Dytiscidae	Ilybius ater		none	Least Concern		a		AB(P1)	47
Coleoptera	Dytiscidae	Ilybius chalconatus		none	Least Concern		a		B	4
Coleoptera	Dytiscidae	Ilybius fuliginosus		none	Least Concern		a		A(D1D 2)B	67
Coleoptera	Dytiscidae	Rhantus frontalis		none	Least Concern		a		A	7
Coleoptera	Elateridae – Click Beetles	Adrastus pallens		none	not yet evaluated				AB	78
Coleoptera	Elateridae	Agriotes obscurus		none	not yet evaluated		g		A	6
Coleoptera	Elateridae	Agriotes pallidulus		none	not yet evaluated				B	46
Coleoptera	Elateridae	Agriotes sputator		none	not yet evaluated		g		AB	456
Coleoptera	Elateridae	Aplotarsus incanus		none	not yet evaluated		w		A	6
Coleoptera	Elateridae	Athous haemorrhoidalis		none	not yet evaluated		s		AB	6
Coleoptera	Elateridae	Dalopius marginatus		none	not yet evaluated				AB	46
Coleoptera	Elateridae	Denticollis linearis		none	not yet evaluated		s	dead wood	AB	6
Coleoptera	Elateridae	Hypnoidus riparius		none	not yet evaluated		w		B	5
Coleoptera	Elateridae	Limonius poneli		none	not yet evaluated		g		AB	46
Coleoptera	Elateridae	Melanotus castanipes		none	not yet evaluated		s	dead wood	A	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Elateridae	Prosternon tessellatum	Chequered Click Beetle	none	not yet evaluated				B	67
Coleoptera	Erirhinidae – Wetland Weevils	Grypus equiseti	Horsetail Weevil	[Nationally Scarce (Notable B)]	not yet evaluated			horsetails	A	4
Coleoptera	Erirhinidae	Notaris acridulus		none	not yet evaluated		w	*Glyceria*	AB	46,10
Coleoptera	Erirhinidae	Notaris scirpi		[Nationally Scarce (Notable B)]	not yet evaluated		w	sedges, club-rushes, bulrush	A	6
Coleoptera	Geotrupidae – Dor Beetles	Geotrupes spiniger		none	Least Concern		g	dung	AB	7
Coleoptera	Gyrinidae – Whirligig Beetles	Gyrinus substriatus		none	Least Concern		a		A(D1) B(ditch)	4
Coleoptera	Haliplidae – Crawling Water Beetles	Haliplus lineatocollis		none	Least Concern		a		A(D1)	46
Coleoptera	Haliplidae	Haliplus obliquus		none	Least Concern	YES	a		B(P1)	4
Coleoptera	Haliplidae	Haliplus ruficollis		none	Least Concern		a		B(P1)	4
Coleoptera	Helophoridae – Water Scavenger Beetles	Helophorus aequalis		none	Least Concern		a		A(D2)	6
Coleoptera	Helophoridae	Helophorus griseus		none	Least Concern		a		B(P2)	4
Coleoptera	Helophoridae	Helophorus minutus		none	Least Concern		a		A(D2)	6
Coleoptera	Helophoridae	Helophorus obscurus		none	Least Concern		a		A(D1, D2,I)	4
Coleoptera	Helophoridae	Helophorus strigifrons		Nationally Scarce	Least Concern	YES	a		B	4
Coleoptera	Heteroceridae – Variegated Mud-loving Beetles	Heterocerus fenestratus		none	Least Concern		w		A	7
Coleoptera	Heteroceridae	Heterocerus fusculus		[Nationally Rare]	[VULNERABLE]		w		A	4

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Histeridae – Clown Beetles	Hister unicolor	Large Dung Clown	none	Least Concern			dung	A	679
Coleoptera	Histeridae	Kissister minimus	Little Clown	none	Least Concern		h		B	6
Coleoptera	Histeridae	Margarinotus brunneus	The Necromancer	none	Least Concern			carrion	B	5
Coleoptera	Histeridae	Margarinotus purpurascens	Blushing Clown	none	Least Concern	YES	h		AB	45
Coleoptera	Histeridae	Margarinotus ventralis	Small Dung Clown	none	Least Concern	YES		dung	AB	67
Coleoptera	Histeridae	Saprinus aeneus	Bronze Mirror Clown	Nationally Scarce	Least Concern	YES	h	carrion and dung	B	58
Coleoptera	Histeridae	Saprinus planiusculus	Coastal Clown	Nationally Scarce	Least Concern	YES	h	carrion	B	5
Coleoptera	Histeridae	Saprinus semistriatus	Carrion Clown	none	Least Concern	YES		carrion	B	5678
Coleoptera	Hydraenidae – Minute Moss Beetles	Hydraena riparia		none	Least Concern		a		A(D2)	46
Coleoptera	Hydraenidae	Hydraena testacea		none	Least Concern	YES	a		A(D1)	4
Coleoptera	Hydraenidae	Ochthebius bicolon		none	Least Concern	YES	a		A(D1)	4
Coleoptera	Hydraenidae	Ochthebius minimus		none	Least Concern		a		A(D1, D2,I)B(P2)	46
Coleoptera	Hydrophilidae – Water Scavenger Beetles (and dung scavenger beetles)	Anacaena globulus		none	Least Concern		w		B	5,11
Coleoptera	Hydrophilidae	Anacaena limbata		none	Least Concern		a		A(D1, D2,I)B(P1,P2,ditch)	456,11
Coleoptera	Hydrophilidae	Anacaena lutescens		none	Least Concern		a		AB(P2)	4
Coleoptera	Hydrophilidae	Cercyon convexiusculus		none	Least Concern		w		B	11
Coleoptera	Hydrophilidae	Cercyon granarius		Nationally Scarce	Least Concern		w		A(D2) B(ditch	4569,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
									,fen)	
Coleoptera	Hydrophilidae	Cercyon haemorrhoidalis		none	not yet evaluated			dung	A	6
Coleoptera	Hydrophilidae	Cercyon impressus		none	not yet evaluated			dung	A	9
Coleoptera	Hydrophilidae	Cercyon lateralis		none	not yet evaluated			dung	A	67
Coleoptera	Hydrophilidae	Cercyon marinus		none	Least Concern		w		A(D2)	79
Coleoptera	Hydrophilidae	Cercyon melanocephalus		none	not yet evaluated			dung	A	6
Coleoptera	Hydrophilidae	Cercyon pygmaeus		none	not yet evaluated			dung	A	6
Coleoptera	Hydrophilidae	Cercyon quisquilius		none	not yet evaluated			dung	AB	67
Coleoptera	Hydrophilidae	Cercyon sternalis		none	Least Concern		w		A(D2) B(P1,ditch)	4567
Coleoptera	Hydrophilidae	Cercyon tristis		none	Least Concern		w		A(D2)	46
Coleoptera	Hydrophilidae	Cercyon ustulatus		none	Least Concern		w		A(D2)	4
Coleoptera	Hydrophilidae	Coelostoma orbiculare		none	Least Concern		a		B(ditch)	45
Coleoptera	Hydrophilidae	Cryptopleurum minutum		none	not yet evaluated			dung usually	AB	56,11
Coleoptera	Hydrophilidae	Cryptopleurum subtile		none	not yet evaluated	YES		decaying vegetation heaps	B	7
Coleoptera	Hydrophilidae	Cymbiodyta marginella		none	Least Concern	YES	a		A(I)B	4,10
Coleoptera	Hydrophilidae	Enochrus coarctatus		none	Least Concern		a		B	7
Coleoptera	Hydrophilidae	Enochrus melanocephalus		none	Least Concern		a		B	7
Coleoptera	Hydrophilidae	Enochrus nigritus		Nationally Scarce	Near Threatened	YES	a		A(D1)	47
Coleoptera	Hydrophilidae	Enochrus quadripunctatus		Nationally Scarce	Least Concern		a		AB	7
Coleoptera	Hydrophilidae	Helochares lividus		none	Least Concern		a		A(D2) B(P1,P2)	49,10
Coleoptera	Hydrophilidae	Hydrobius fuscipes sens.		none	not yet evaluated		a		AB(P1)	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
		str.								
Coleoptera	Hydrophilidae	Hydrobius rottenbergii		none	not yet evaluated		a		A(D2)	4
Coleoptera	Hydrophilidae	Hydrobius subrotundus		none	not yet evaluated		a		A(D1) B(P1,P2)	467
Coleoptera	Hydrophilidae	Laccobius bipunctatus		none	Least Concern		a		A(D2) B(P1)	4679
Coleoptera	Hydrophilidae	Megasternum concinnum		none	not yet evaluated				A	4
Coleoptera	Hydrophilidae	Sphaeridium bipustulatum		none	not yet evaluated			dung	A	6
Coleoptera	Hydrophilidae	Sphaeridium lunatum		none	not yet evaluated			dung	AB	469
Coleoptera	Hydrophilidae	Sphaeridium scarabaeoides		none	not yet evaluated			dung	A	9
Coleoptera	Kateretidae – Short-winged Flower Beetles	Brachypterus urticae	Nettle Pollen Beetle	none	not yet evaluated			stinging nettle	AB	6,10
Coleoptera	Kateretidae	Kateretes pusillus		none	not yet evaluated		w	sedges	A	4
Coleoptera	Kateretidae	Kateretes rufilabris		none	not yet evaluated		w	Carex and Juncus	B	7
Coleoptera	Lampyridae – Glow Worms	Lampyris noctiluca	Glow-worm	none	Least Concern			snails	AB	47,11
Coleoptera	Latridiidae – Minute Brown Scavenger Beetles	Cartodere bifasciata		none	not yet evaluated				A	4
Coleoptera	Latridiidae	Corticaria impressa		none	not yet evaluated				A	4
Coleoptera	Latridiidae	Corticarina minuta		none	not yet evaluated				A	469,11
Coleoptera	Latridiidae	Corticarina similata		none	not yet evaluated		s		A	6
Coleoptera	Latridiidae	Cortinicara gibbosa		none	not yet evaluated				AB	467,10,11
Coleoptera	Leiodidae – Round Fungus Beetles	Catops morio		none	not yet evaluated				A	4
Coleoptera	Leiodidae	Choleva angustata		none	not yet evaluated				AB	45
Coleoptera	Leiodidae	Choleva jeanneli		none	not yet evaluated				B	56

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Leiodidae	Choleva oblonga		none	not yet evaluated				A	6
Coleoptera	Leiodidae	Ptomaphagus subvillosus		none	not yet evaluated				B	5
Coleoptera	Melandryidae – False Darkling Beetles	Abdera biflexuosa		Nationally Scarce	Least Concern		s	dead wood, usually off oak boughs	B	67
Coleoptera	Melyridae – Soft-winged Flower Beetles	Anthocomus fasciatus		Nationally Scarce	Least Concern	YES			B	4
Coleoptera	Melyridae	Anthocomus rufus		none	Least Concern		w	usually Phragmites stands	B	9
Coleoptera	Melyridae	Axinotarsus marginalis		none	Least Concern	YES			A	67
Coleoptera	Melyridae	Cordylepherus viridis		none	Least Concern		g		A	6
Coleoptera	Melyridae	Dasytes aeratus		none	Least Concern		s		AB	46
Coleoptera	Melyridae	Malachius bipustulatus	Malachite Beetle	none	Least Concern		g		B	6
Coleoptera	Mordellidae – Tumbling Flower Beetles	Mordellistena variegata		Nationally Scarce	Least Concern		s		B	67
Coleoptera	Mycetophagidae – Hairy Fungus Beetles	Litargus connexus		none	Least Concern		s		A	6
Coleoptera	Mycetophagidae	Typhaea haagi		none	Not Applicable	YES			B	7
Coleoptera	Nitidulidae – Sap and Pollen Beetles	Epuraea aestiva		none	not yet evaluated				A	4
Coleoptera	Nitidulidae	Epuraea unicolor		none	not yet evaluated				AB	4,10,11
Coleoptera	Nitidulidae	Glischrochilus hortensis		none	not yet evaluated				AB	4579
Coleoptera	Nitidulidae	Meligethes aeneus	Common Pollen Beetle	none	not yet evaluated			Brassicaceae	AB	467
Coleoptera	Nitidulidae	Meligethes matronalis		none	not yet evaluated		g	dame's violet	A	6
Coleoptera	Nitidulidae	Meligethes nigrescens		none	not yet evaluated		g	clovers	AB	4
Coleoptera	Nitidulidae	Meligethes ovatus		none	not yet evaluated		g	ground ivy	AB	67

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Nitidulidae	Meligethes ruficornis		none	not yet evaluated		g	black horehound	A	6
Coleoptera	Nitidulidae	Pria dulcamarae		none	not yet evaluated	YES		woody nightshade	A	6
Coleoptera	Nitidulidae	Soronia grisea		none	not yet evaluated	YES			AB	47
Coleoptera	Nitidulidae	Thalycra fervida		Nationally Scarce (Notable B)	not yet evaluated	YES		sap runs and decaying organic matter	A	
Coleoptera	Oedemeridae	Oedemera lurida		none	Least Concern		g		AB	67
Coleoptera	Oedemeridae	Oedemera nobilis	Swollen-thighed Beetle	none	Least Concern		g		AB	67
Coleoptera	Orsodacnidae – Orsodacnid Leaf Beetles	Orsodacne cerasi		Nationally Scarce	Least Concern	YES	s		A	6
Coleoptera	Phalacridae	Olibrus aeneus		none	Least Concern		g/h	often on mayweeds	B	4
Coleoptera	Phalacridae	Olibrus corticalis		none	Least Concern		g	ragworts, fleabanes	A	49
Coleoptera	Phalacridae	Olibrus liquidus		none	Least Concern		g		B	46,10
Coleoptera	Phalacridae	Olibrus millefolii		Nationally Scarce	Least Concern		h	yarrow	B	7
Coleoptera	Phalacridae	Olibrus pygmaeus		Nationally Scarce	Least Concern		h	common cudweed	B	7
Coleoptera	Phalacridae	Phalacrus corruscus		none	Least Concern	YES	g	smutted foliage, ? cereal crops	A	4
Coleoptera	Phalacridae	Stilbus testaceus		none	Least Concern				AB	4679,10,11
Coleoptera	Ptiliidae – Feather-wing Beetles	Ptenidium pusillum		none	not yet evaluated				B	6
Coleoptera	Ptinidae – Wood-borer Beetles	Anobium inexspectatum		none	Least Concern		s	dead stems of ivy	A	6
Coleoptera	Ptinidae	Anobium punctatum	Woodworm	none	Least Concern		s	dead wood, usually oaks	B	7
Coleoptera	Ptinidae	Hadrobregmus denticollis		Nationally Scarce	Least Concern	YES	s	dead wood	A	6
Coleoptera	Ptinidae	Hemicoelus fulvicornis		none	Least Concern		s	dead wood,	AB	67

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
								usually oaks		
Coleoptera	Ptinidae	Ochina ptinoides	Ivy Boring Beetle	none	Least Concern	YES	s	ivy	A	6
Coleoptera	Ptinidae	Ptinomorphus imperialis		none	Least Concern		s	dead wood	B	6
Coleoptera	Rhynchitidae – Tooth-nosed Snout Weevils	Involvulus icosandriae	Apple Twig Cutter	none	not yet evaluated		s	blacktjorn, hawthorn etc	A	4
Coleoptera	Rhynchitidae	Neocoenorrhinus minutus		none	not yet evaluated	YES	s	oaks	B	4
Coleoptera	Rhynchitidae	Tatianaerhynchites aequatus	Apple Fruit Rhynchites	none	not yet evaluated		s	hawthorn	AB	46
Coleoptera	Salpingidae – Narrow-waisted Bark Beetles	Lissodema denticollis		Nationally Scarce	Least Concern		s	dead wood	B	6
Coleoptera	Salpingidae	Salpingus planirostris		none	Least Concern		s	dead wood	AB	467
Coleoptera	Salpingidae	Vincenzellus ruficollis		none	Least Concern		s	dead wood	B	7
Coleoptera	Scarabaeidae – Dung Beetles and Chafers	Acrossus depressus		none	Least Concern			dung	A	46
Coleoptera	Scarabaeidae	Acrossus rufipes		none	Least Concern			dung	AB	7
Coleoptera	Scarabaeidae	Agrilinus ater		none	Least Concern			dung	A	4
Coleoptera	Scarabaeidae	Amphimallon solstitiale	Summer Chafer	none	Least Concern				B	7
Coleoptera	Scarabaeidae	Aphodius fimetarius		none	Least Concern			dung	AB	6
Coleoptera	Scarabaeidae	Aphodius foetidus		none	Least Concern			dung	AB	6
Coleoptera	Scarabaeidae	Bodiloides ictericus		Nationally Scarce	Least Concern		h	dung	B	6
Coleoptera	Scarabaeidae	Bodilopsis rufa		none	Least Concern			dung	A	79
Coleoptera	Scarabaeidae	Calamosternus granarius		none	Least Concern			dung	AB	456
Coleoptera	Scarabaeidae	Chilothorax distinctus		Nationally Scarce	Least Concern		h	dung	B	5
Coleoptera	Scarabaeidae	Colobopterus erraticus		none	Least Concern		g	dung	A	6
Coleoptera	Scarabaeidae	Esymus pusillus		none	Least Concern			dung	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Scarabaeidae	Hoplia philanthus	Welsh Chafer	none	Least Concern				AB	6
Coleoptera	Scarabaeidae	Melinopterus prodromus		none	Least Concern			dung	B	4
Coleoptera	Scarabaeidae	Melinopterus sphacelatus		none	Least Concern			dung	AB	4,11
Coleoptera	Scarabaeidae	Onthophagus joannae		none	Least Concern			dung	B	7
Coleoptera	Scarabaeidae	Onthophagus similis		none	Least Concern			dung	AB	456
Coleoptera	Scarabaeidae	Otophorus haemorrhoidalis		none	Least Concern			dung	AB	6
Coleoptera	Scarabaeidae	Phyllopertha horticola	Bracken Chafer	none	Least Concern		g		A	6
Coleoptera	Scarabaeidae	Serica brunnea	Brown Chafer	none	Least Concern		h		B	7
Coleoptera	Scarabaeidae	Teuchestes fossor		none	Least Concern	YES		dung	A	67
Coleoptera	Scirtidae – Marsh Beetles	Contacyphon coarctatus		none	Least Concern		a/w		AB	456
Coleoptera	Scirtidae	Contacyphon ochraceus		none	Least Concern		a/w		B	6
Coleoptera	Scirtidae	Contacyphon padi		none	Least Concern		a/w		AB	4
Coleoptera	Scirtidae	Contacyphon variabilis		none	Least Concern		a/w		B	4
Coleoptera	Scirtidae	Elodes elongatus		Nationally Scarce	Least Concern		a/w		B	6
Coleoptera	Scirtidae	Microcara testacea		none	Least Concern		a/s		A	6
Coleoptera	Scirtidae	Scirtes hemisphaericus		none	Least Concern		w		B	7
Coleoptera	*Scirtidae*	*Scirtidae larva*		none			*a*		*A(D2)*	*4*
Coleoptera	Scraptiidae – False Flower Beetles	Anaspis fasciata		none	Least Concern		s	dead wood	AB	46
Coleoptera	Scraptiidae	Anaspis garneysi		none	Least Concern		s	dead wood	AB	4
Coleoptera	Scraptiidae	Anaspis maculata		none	Least Concern		s	dead wood	AB	46
Coleoptera	Scraptiidae	Anaspis pulicaria		none	Least Concern				AB	67
Coleoptera	Scraptiidae	Anaspis regimbarti		none	Least Concern		s	dead wood	B	4
Coleoptera	Scraptiidae	Anaspis thoracica		Nationally Scarce	Least Concern		s	dead wood	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Silphidae – Carrion and Burying Beetles	Ablattaria laevigata	Smooth Snail-hunter	none	Least Concern		h	snails	B	5
Coleoptera	Silphidae	Nicrophorus humator	The Undertaker	none	Least Concern			carrion	B	8
Coleoptera	Silphidae	Nicrophorus vespillo	Bent-legged Burying Beetle	none	Least Concern			carrion	A	4
Coleoptera	Silphidae	Oiceoptoma thoracicum	Red-breasted Carrion Beetle	none	Least Concern			carrion, fungi and dung	B	5
Coleoptera	Silphidae	Phosphuga atrata	Common Snail-hunter	none	Least Concern			snails	B	10,11
Coleoptera	Silphidae	Silpha tristis	Grassland Carrion Beetle	none	Least Concern		g	slugs?	AB	67
Coleoptera	Silphidae	Thanatophilus rugosus	Wrinkled Death-lover	none	Least Concern			carrion	B	5
Coleoptera	Silphidae	Thanatophilus sinuatus	Smooth Death-lover	none	Least Concern			carrion	B	8
Coleoptera	Silvanidae – Silvanid Beetles	Psammoecus bipunctatus		none	not yet evaluated		w		AB	46,10,11
Coleoptera	Sphindidae – Cryptic Slime-mould Beetles	Sphindus dubius		Nationally Scarce (Notable B)	not yet evaluated		s	slime moulds	B	7
Coleoptera	Staphylinidae – Rove Beetles	Acrotona muscorum		none	not yet evaluated			dung etc	B	5
Coleoptera	Staphylinidae	Acrotona parvula		none	not yet evaluated			dung etc	A	9
Coleoptera	Staphylinidae	Acrotona pseudotenera		none	not yet evaluated			usually decaying vegetation heaps	B	5
Coleoptera	Staphylinidae	Aleochara bilineata		none	not yet evaluated				B	6
Coleoptera	Staphylinidae	Aleochara bipustulata		none	not yet evaluated			dung, carrion etc	B	456
Coleoptera	Staphylinidae	Aleochara brevipennis		Nationally Scarce (Notable)	not yet evaluated		g		A	469
Coleoptera	Staphylinidae	Aleochara funebris		none	not yet evaluated	YES			B	56
Coleoptera	Staphylinidae	Aleochara lanuginosa		none	not yet evaluated			dung	AB	6
Coleoptera	Staphylinidae	Aleochara lata		none	not yet evaluated	YES		carrion	B	5

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Aleochara tristis		none	not yet evaluated			dung	A	9
Coleoptera	Staphylinidae	Aleochara verna		[Nationally Rare (Red Data Book insufficiently known)]	not yet evaluated			dung	B	5
Coleoptera	Staphylinidae	Aloconota gregaria		none	not yet evaluated				AB	45,11
Coleoptera	Staphylinidae	Amarochara forticornis		Nationally Rare (Red Data Book insufficiently known)	not yet evaluated	YES	w?		A	11
Coleoptera	Staphylinidae	Amischa analis		none	not yet evaluated				AB	469,11
Coleoptera	Staphylinidae	Amischa decipiens		none	not yet evaluated				B	9,11
Coleoptera	Staphylinidae	Amischa forcipata		none	not yet evaluated				A	4,11
Coleoptera	Staphylinidae	Amischa nigrofusca		none	not yet evaluated	YES			AB	4,11
Coleoptera	Staphylinidae	Anotylus nitidulus		none	Least Concern	YES		dung, carrion etc	AB	467
Coleoptera	Staphylinidae	Anotylus rugosus		none	Least Concern				AB	45679,11
Coleoptera	Staphylinidae	Anotylus sculpturatus		none	Least Concern			dung usually	B	67
Coleoptera	Staphylinidae	Astenus lyonessius		none	Least Concern		g		B	10
Coleoptera	Staphylinidae	Astenus pulchellus		none	Least Concern			decaying vegetation heaps	A	11
Coleoptera	Staphylinidae	Atheta aquatica		none	not yet evaluated				B	4
Coleoptera	Staphylinidae	Atheta basicornis		Nationally Scarce (Notable)	not yet evaluated	YES	w		A	6
Coleoptera	Staphylinidae	Atheta crassicornis		none	not yet evaluated				B	10
Coleoptera	Staphylinidae	Atheta graminicola		none	not yet evaluated		w		AB	49,11
Coleoptera	Staphylinidae	Atheta scapularis		Nationally Scarce (Notable)	not yet evaluated	YES			B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Atheta vaga		none	not yet evaluated	YES			B	5
Coleoptera	Staphylinidae	Autalia rivularis		none	not yet evaluated			dung usually	A	9
Coleoptera	Staphylinidae	Bisnius fimetarius		none	Least Concern			dung and decaying organic matter	B	56
Coleoptera	Staphylinidae	Bledius dissimilis		Nationally Scarce	Least Concern		w		A	7
Coleoptera	Staphylinidae	Bledius gallicus		none	Least Concern		w		AB	4679
Coleoptera	Staphylinidae	Bolitobius castaneus		none	Least Concern				B	11
Coleoptera	Staphylinidae	Bryaxis bulbifer		none	not yet evaluated				AB	4
Coleoptera	Staphylinidae	Carpelimus corticinus		none	Least Concern		w		AB	46
Coleoptera	Staphylinidae	Carpelimus elongatulus		none	Least Concern		w		B	11
Coleoptera	Staphylinidae	Carpelimus impressus		none	Least Concern	YES	w		B	11
Coleoptera	Staphylinidae	Carpelimus incongruus		none	Least Concern	YES	w		A	6
Coleoptera	Staphylinidae	Carpelimus lindrothi		Nationally Scarce	Least Concern	YES	w		A	9
Coleoptera	Staphylinidae	Carpelimus pusillus		none	Least Concern				A	9
Coleoptera	Staphylinidae	Carpelimus rivularis		none	Least Concern		w		A	49
Coleoptera	Staphylinidae	Chaetida (Atheta) longicornis		none	not yet evaluated			dung	AB	59
Coleoptera	Staphylinidae	Coprothassa (Atheta) melanaria		none	not yet evaluated			dung	B	5
Coleoptera	Staphylinidae	Cordalia obscura		none	not yet evaluated				A	11
Coleoptera	Staphylinidae	Creophilus maxillosus		none	Least Concern	YES		carrion	B	5
Coleoptera	Staphylinidae	Cypha discoidea		Nationally Scarce (Notable B)	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Cypha longicornis		none	not yet evaluated				B	7,11
Coleoptera	Staphylinidae	Datomicra (Atheta) canescens		none	not yet evaluated	YES			B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Datomicra (Atheta) celata		none	not yet evaluated				B	6
Coleoptera	Staphylinidae	Datomicra (Atheta) nigra		none	not yet evaluated			decaying organic matter	B	6
Coleoptera	Staphylinidae	Deinopsis erosa		none	not yet evaluated		w		A	9
Coleoptera	Staphylinidae	Dimetrota (Atheta) nigripes		none	not yet evaluated			dung	A	69
Coleoptera	Staphylinidae	Dimetrotina laticollis		none	not yet evaluated			decaying vegetation heaps	B	10
Coleoptera	Staphylinidae	Dinaraea angustula		none	not yet evaluated				AB	4
Coleoptera	Staphylinidae	Dochmonota clancula		Nationally Scarce (Notable)	not yet evaluated		w		B	4
Coleoptera	Staphylinidae	Drusilla canaliculata		none	not yet evaluated		g		B	6,10,11
Coleoptera	Staphylinidae	Encephalus complicans		none	not yet evaluated				B	6
Coleoptera	Staphylinidae	Euaesthetus ruficapillus		none	Least Concern		w		B	4,10,11
Coleoptera	Staphylinidae	Gabrius breviventer		none	Least Concern		w		AB	46,11
Coleoptera	Staphylinidae	Geostiba circellaris		none	not yet evaluated				AB	11
Coleoptera	Staphylinidae	Gnypeta carbonaria		none	not yet evaluated		w		A	9
Coleoptera	Staphylinidae	Gnypeta rubrior		none	not yet evaluated	YES	w		A	9
Coleoptera	Staphylinidae	Gyrohypnus fracticornis		none	Least Concern			dung usually	AB	6,11
Coleoptera	Staphylinidae	Habrocerus capillaricornis		none	Least Concern			decaying organic matter	B	6,10,11
Coleoptera	Staphylinidae	Hapalaraea pygmaea		none	Least Concern		s		A	6
Coleoptera	Staphylinidae	Heterothops minutus		none	Least Concern			decaying vegetation heaps	B	6,11
Coleoptera	Staphylinidae	Hygronoma dimidiata		none	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Ischnosoma splendidum		none	Least Concern				AB	4,11
Coleoptera	Staphylinidae	Lathrobium brunnipes		none	Least Concern				A	11
Coleoptera	Staphylinidae	Lathrobium fovulum		Nationally	Least Concern		w		B	11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
				Scarce						
Coleoptera	Staphylinidae	Lathrobium geminum		none	Least Concern				AB	6,11
Coleoptera	Staphylinidae	Lesteva longoelytrata		none	Least Concern	YES	w		B	45
Coleoptera	Staphylinidae	Lesteva sicula		none	Least Concern		w		AB	4,10
Coleoptera	Staphylinidae	Liogluta longiuscula		none	not yet evaluated				B	5
Coleoptera	Staphylinidae	Lithocharis nigriceps		none	Least Concern			decaying vegetation heaps	B	10,11
Coleoptera	Staphylinidae	Meotica filiformis		none	not yet evaluated	YES	w		A	4
Coleoptera	Staphylinidae	Microdota (Atheta) indubia		none	not yet evaluated	YES			B	6
Coleoptera	Staphylinidae	Mocyta (Atheta) fungi		none	not yet evaluated				AB	11
Coleoptera	Staphylinidae	*Mocyta (Atheta) fungi agg.*							AB	46
Coleoptera	Staphylinidae	Myllaena minuta		none	not yet evaluated		w		B	4
Coleoptera	Staphylinidae	Nehemitropia lividipennis		none	not yet evaluated			decaying vegetation heaps	B	9,10
Coleoptera	Staphylinidae	Ochthephilum fracticorne		none	Least Concern				B	4
Coleoptera	Staphylinidae	Ocypus aeneocephalus		none	Least Concern		g		A	4
Coleoptera	Staphylinidae	Ocyusa maura		none	not yet evaluated		w		B	11
Coleoptera	Staphylinidae	Ocyusa picina		none	not yet evaluated		w		AB	459,10,11
Coleoptera	Staphylinidae	Omalium oxyacanthae		Nationally Scarce	Least Concern	YES		decaying organic matter	B	5
Coleoptera	Staphylinidae	Omalium rivulare		none	Least Concern				B	11
Coleoptera	Staphylinidae	Ontholestes murinus		none	Least Concern			dung	A	6
Coleoptera	Staphylinidae	Othius angustus		none	Least Concern				B	11
Coleoptera	Staphylinidae	Othius laeviusculus		none	Least Concern				AB	56
Coleoptera	Staphylinidae	Ousipalia caesula		none	not yet evaluated		h		B	6
Coleoptera	Staphylinidae	Oxypoda brevicornis		none	not yet evaluated				AB	67

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Oxypoda elongatula		none	not yet evaluated	YES	w		AB	49,10,11
Coleoptera	Staphylinidae	Oxypoda ferruginea		none	not yet evaluated	YES	h		B	11
Coleoptera	Staphylinidae	Oxypoda haemorrhoa		none	not yet evaluated			decaying vegetation heaps	A	6
Coleoptera	Staphylinidae	Oxypoda lurida		Nationally Scarce (Notable)	not yet evaluated	YES	h		B	5
Coleoptera	Staphylinidae	Oxytelus laqueatus		none	Least Concern			dung	AB	67
Coleoptera	Staphylinidae	Oxytelus piceus		Nationally Scarce	Least Concern	YES	h	dung	A	7
Coleoptera	Staphylinidae	Pachnida nigella		none	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Paederus riparius		none	Least Concern		w		AB	46
Coleoptera	Staphylinidae	Philhygra (Atheta) elongatula		none	not yet evaluated	YES	w		A	4
Coleoptera	Staphylinidae	Philhygra (Atheta) gyllenhalii		none	not yet evaluated	YES	w		B	10
Coleoptera	Staphylinidae	Philhygra (Atheta) malleus		none	not yet evaluated	YES	w		AB	679,10
Coleoptera	Staphylinidae	Philhygra (Atheta) volans		none	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Philonthus carbonarius		none	Least Concern				AB	469,10,11
Coleoptera	Staphylinidae	Philonthus cognatus		none	Least Concern				AB	469,10
Coleoptera	Staphylinidae	Philonthus concinnus		none	Least Concern				AB	6,11
Coleoptera	Staphylinidae	Philonthus cruentatus		none	Least Concern			often in dung	A	6
Coleoptera	Staphylinidae	Philonthus debilis		none	Least Concern	YES		decaying vegetation heaps	B	9
Coleoptera	Staphylinidae	Philonthus discoideus		none	Least Concern			dung and manure heaps	A	6
Coleoptera	Staphylinidae	Philonthus intermedius		none	Least Concern				A	6
Coleoptera	Staphylinidae	Philonthus laminatus		none	Least Concern				A	46
Coleoptera	Staphylinidae	Philonthus marginatus		none	Least Concern			dung usually	A	69

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Philonthus micantoides		none	Least Concern	YES	w		A	46
Coleoptera	Staphylinidae	Philonthus nigrita		none	Least Concern		w		B	5
Coleoptera	Staphylinidae	Philonthus politus		none	Least Concern			carrion often	AB	56
Coleoptera	Staphylinidae	Philonthus quisquiliarius		none	Least Concern		w		AB	45
Coleoptera	Staphylinidae	Philonthus rectangulus		none	Least Concern			dung heaps etc	A	6
Coleoptera	Staphylinidae	Philonthus sanguinolentus		none	Least Concern			usually in dung	A	6
Coleoptera	Staphylinidae	Philonthus splendens		none	Least Concern				A	69
Coleoptera	Staphylinidae	Philonthus tenuicornis		none	Least Concern				AB	46
Coleoptera	Staphylinidae	Philonthus varians		none	Least Concern			often in dung	AB	569,11
Coleoptera	Staphylinidae	Philorinum sordidum		none	Least Concern		h	gorse	B	4
Coleoptera	Staphylinidae	Phloeopora scribae		none	not yet evaluated	YES	s	dead wood etc	A	4
Coleoptera	Staphylinidae	Platystethus alutaceus		none	Least Concern		w		A	4
Coleoptera	Staphylinidae	Platystethus cornutus		none	Least Concern		w		A	69
Coleoptera	Staphylinidae	Platystethus nitens		none	Least Concern		w		A	6,11
Coleoptera	Staphylinidae	Platystethus nodifrons		none	Least Concern		w		AB	45
Coleoptera	Staphylinidae	Proteinus ovalis		none	Least Concern				B	10
Coleoptera	Staphylinidae	Quedius cruentus		none	Least Concern			decaying vegetation heaps and blossoms	B	6,11
Coleoptera	Staphylinidae	Quedius curtipennis		none	Least Concern				A	4
Coleoptera	Staphylinidae	Quedius fuliginosus		none	Least Concern				B	9,11
Coleoptera	Staphylinidae	Quedius fumatus		none	Least Concern	YES			B	46,11
Coleoptera	Staphylinidae	Quedius lateralis		none	Least Concern				B	10
Coleoptera	Staphylinidae	Quedius levicollis		none	Least Concern		h		AB	67,11
Coleoptera	Staphylinidae	Quedius maurorufus		none	Least Concern		w		AB	49,10,11
Coleoptera	Staphylinidae	Quedius mesomelinus		none	Least Concern				B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Quedius molochinus		none	Least Concern				B	11
Coleoptera	Staphylinidae	Quedius persimilis		none	Least Concern		h		B	4
Coleoptera	Staphylinidae	Quedius picipes		none	Least Concern				B	6,11
Coleoptera	Staphylinidae	Quedius scintillans		none	Least Concern			decaying organic matter	B	6
Coleoptera	Staphylinidae	Quedius semiobscurus		none	Least Concern		g		B	5
Coleoptera	Staphylinidae	Reichenbachia juncorum		none	not yet evaluated		w		B	10
Coleoptera	Staphylinidae	Rugilus erichsonii		none	Least Concern				AB	4,11
Coleoptera	Staphylinidae	Rugilus orbiculatus		none	Least Concern				B	6
Coleoptera	Staphylinidae	Rugilus rufipes		none	Least Concern	YES			AB	4,11
Coleoptera	Staphylinidae	Rybaxis longicornis		none	not yet evaluated		w		B	9,11
Coleoptera	Staphylinidae	Sepedophilus littoreus		none	Least Concern				B	10
Coleoptera	Staphylinidae	Sepedophilus marshami		none	Least Concern				B	6,11
Coleoptera	Staphylinidae	Sepedophilus nigripennis		none	Least Concern				B	7,10,11
Coleoptera	Staphylinidae	Stenus aceris		none	not yet evaluated		g		B	10
Coleoptera	Staphylinidae	Stenus bifoveolatus		none	not yet evaluated		w		AB	4,10,11
Coleoptera	Staphylinidae	Stenus bimaculatus		none	not yet evaluated		w		AB	49,10,11
Coleoptera	Staphylinidae	Stenus boops		none	not yet evaluated		w		A	469
Coleoptera	Staphylinidae	Stenus brunnipes		none	not yet evaluated				AB	11
Coleoptera	Staphylinidae	Stenus butrintensis		Nationally Scarce (Notable)	not yet evaluated	YES	w		A	46
Coleoptera	Staphylinidae	Stenus carbonarius		none	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Stenus cicindeloides		none	not yet evaluated		w		AB	469,10,11
Coleoptera	Staphylinidae	Stenus flavipes		none	not yet evaluated		g		B	4,10,11
Coleoptera	Staphylinidae	Stenus fulvicornis		none	not yet evaluated		g		AB	4,10,11
Coleoptera	Staphylinidae	Stenus juno		none	not yet evaluated		w		AB	4569,10,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Stenus nitidiusculus		none	not yet evaluated				B	49,10
Coleoptera	Staphylinidae	Stenus ossium		none	not yet evaluated		g		A	4,11
Coleoptera	Staphylinidae	Stenus pallipes		none	not yet evaluated		w		A	4,11
Coleoptera	Staphylinidae	Stenus picipennis		none	not yet evaluated		w		A	4
Coleoptera	Staphylinidae	Stenus picipes		none	not yet evaluated				B	10,11
Coleoptera	Staphylinidae	Stenus providus		none	not yet evaluated				B	4,10,11
Coleoptera	Staphylinidae	Stenus pusillus		none	not yet evaluated		w		AB	10,11
Coleoptera	Staphylinidae	Stenus similis		none	not yet evaluated		g		AB	4,11
Coleoptera	Staphylinidae	Stenus solutus		none	not yet evaluated		w		AB	46,10
Coleoptera	Staphylinidae	Sunius propinquus		none	Least Concern				A	11
Coleoptera	Staphylinidae	Tachinus flavolimbatus		Nationally Scarce	Least Concern			decaying vegetation heaps mainly	AB	4,10
Coleoptera	Staphylinidae	Tachinus laticollis		none	Least Concern			often in dung	A	4
Coleoptera	Staphylinidae	Tachinus marginellus		none	Least Concern			often in dung	B	6,11
Coleoptera	Staphylinidae	Tachinus rufipes		none	Least Concern				AB	46,11
Coleoptera	Staphylinidae	Tachyporus atriceps		none	Least Concern			mosses	B	11
Coleoptera	Staphylinidae	Tachyporus chrysomelinus		none	Least Concern				B	11
Coleoptera	Staphylinidae	Tachyporus dispar		none	Least Concern				AB	11
Coleoptera	Staphylinidae	Tachyporus hypnorum		none	Least Concern	YES			AB	4567,10,11
Coleoptera	Staphylinidae	Tachyporus nitidulus		none	Least Concern				AB	4567,11
Coleoptera	Staphylinidae	Tachyporus pallidus		none	Least Concern		w		B	11
Coleoptera	Staphylinidae	Tachyporus pusillus		none	Least Concern				B	567,11
Coleoptera	Staphylinidae	Tachyporus tersus		none	Least Concern				B	11
Coleoptera	Staphylinidae	Tasgius ater		none	Least Concern				B	7
Coleoptera	Staphylinidae	Thinonoma atra		none	not yet evaluated		w		AB	9,11

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Coleoptera	Staphylinidae	Tinotus (Aleochara) morion	now Aleochara	none	not yet evaluated	YES		dung	A	9
Coleoptera	Staphylinidae	Xantholinus linearis		none	Least Concern				B	6,11
Coleoptera	Staphylinidae	Xantholinus longiventris		none	Least Concern				AB	46
Coleoptera	Tenebrionidae – Darkling Beetles	Cteniopus sulphureus	Sulphur Beetle	none	Least Concern		h		B	67
Coleoptera	Tenebrionidae	Isomira murina		none	Least Concern		h		AB	6
Coleoptera	Tenebrionidae	Lagria hirta		none	Least Concern				AB	79
Coleoptera	Throscidae – Throscid Beetles	Aulonothroscus brevicollis		[Nationally Rare (Red Data Book 3)]	not yet evaluated	YES	s		A	6
Coleoptera	Throscidae	Trixagus obtusus		none	not yet evaluated				A	69
Cyclopoida	Cyclopidae	*Cyclops sp*							A(I)B(P2)	4
Dermaptera – EARWIGS	Forficulidae – Earwigs	Apterygida media	Short-winged Earwig	Nationally Scarce	Least Concern	YES			A	8
Dermaptera	Forficulidae	Forficula auricularia	Common Earwig	none	Least Concern				AB	45679,10
Diptera – FLIES	Asilidae – Robberflies	Dioctria atricapilla	Violet Black-legged	none	Least Concern		g		A	6
Diptera	Asilidae	Dioctria rufipes	Common Red-legged Robberfly	none	Least Concern		g		A	6
Diptera	Asilidae	Leptogaster cylindrica	Striped Slender Robberfly	none	Least Concern		g		B	7
Diptera	Asilidae	Machimus atricapillus	Kite-tailed Robberfly	none	Least Concern				AB	9,10
Diptera	Bibionidae – March Flies	Bibio anglicus	Downland Bibio	none	not yet evaluated				AB	4
Diptera	Bibionidae	Bibio johannis	Johann’s Bibio	none	not yet evaluated				AB	4
Diptera	Bibionidae	Bibio marci	St Marks Fly	none	not yet evaluated				AB	4
Diptera	Bibionidae	Dilophus febrilis	Common Fever Fly	none	not yet evaluated				A	9
Diptera	Bombyliidae – Bee Flies	Bombylius major	Dark-edged Bee-fly	none	Least Concern				AB	4

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Conopidae – Thick-headed Flies	Myopa vicaria	Hairy-legged Spring Bee-grabber	none	not yet evaluated				B	4
Diptera	Conopidae	Sicus ferrugineus	Ferruginous Bee-grabber	none	not yet evaluated				A	6
Diptera	Dolichopodidae – Long-legged Flies	Dolichopus nubilus		none	Least Concern		w		A	9
Diptera	Dolichopodidae	Dolichopus plumipes		none	Least Concern		w		A	6
Diptera	Dolichopodidae	Dolichopus popularis		none	Least Concern				A	6
Diptera	Dolichopodidae	Dolichopus ungulatus		none	Least Concern				A	6
Diptera	Dolichopodidae	Hercostomus plagiatus		Nationally Scarce	Least Concern		w		B	7
Diptera	Dolichopodidae	Sciapus wiedemanni		none	Least Concern				B	6
Diptera	Empididae – Dagger Flies	Empis chioptera		none	Least Concern				AB	4
Diptera	Empididae	Empis livida		none	Least Concern				B	6
Diptera	Empididae	Empis nuntia		none	Least Concern				A	4
Diptera	Empididae	Empis trigramma		none	Least Concern				A	4
Diptera	Empididae	Rhamphomyia pilifer		none	Least Concern				A	4
Diptera	Empididae	Rhamphomyia subcinerascens		none	Least Concern				AB	4
Diptera	Empididae	Rhamphomyia tarsata		none	Least Concern				A	46
Diptera	Limoniidae – Limoniid Craneflies	Ellipteroides lateralis	Upturned Black Lamb	none	not yet evaluated		w		B	67
Diptera	Limoniidae	Epiphragma ocellare	Large Ocelot	none	not yet evaluated		s	dead wood	B	7
Diptera	Limoniidae	Erioconopa trivialis	Common Striped Twist-tail	none	not yet evaluated				A	49
Diptera	Limoniidae	Erioptera fuscipennis	Common Black Splay	none	not yet evaluated		w		B	47
Diptera	Limoniidae	Erioptera lutea	Dark-knobbed Splay	none	not yet evaluated		w		B	4
Diptera	Limoniidae	Helius flavus	Yellow Snout	none	not yet evaluated		w		B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Limoniidae	Limonia nubeculosa	Three-banded Limonia	none	not yet evaluated		s	dead wood	A	4
Diptera	Limoniidae	Molophilus obscurus	Large-thumbed Dark Mol	none	not yet evaluated		w		B	6
Diptera	Limoniidae	Phylidorea ferruginea	Ringed Orange Longtail	none	not yet evaluated		w		AB	46
Diptera	Limoniidae	Phylidorea fulvonervosa	Striped Orange Longtail	none	not yet evaluated		w		B	6
Diptera	Limoniidae	Phylidorea squalens	Dull Bog Longtail	none	not yet evaluated		w		B	9
Diptera	Limoniidae	Pilaria discicollis	Yellow-shouldered Water-longtail	none	not yet evaluated		w		B	7
Diptera	Limoniidae	Pseudolimnophila lucorum	Grey Longneck	none	not yet evaluated		w		AB	67
Diptera	Limoniidae	Pseudolimnophila sepium	Brown Longneck	none	not yet evaluated		w		B	6
Diptera	Limoniidae	Symplecta stictica	Marsh Splay	none	not yet evaluated		w		A	4
Diptera	Muscidae – Muscid Flies	Mesembrina meridiana	Noon Fly	none	Least Concern				A	7
Diptera	Opomyzidae – Opomyzid Flies	Opomyza florum		none	not yet evaluated				B	7
Diptera	Opomyzidae	Opomyza petrei		none	not yet evaluated				A	9
Diptera	Opomyzidae	Opomyza punctata		Nationally Scarce	not yet evaluated				A	9
Diptera	Pediciidae – Hairy-eyed Craneflies	Tricyphona immaculata	Single-striped Black Hairy-eye	none	not yet evaluated		w		AB	4,10
Diptera	Ptychopteridae – Phantom Craneflies	Ptychoptera albimana	Yellow-banded Weak-mark Foldwing	none	Least Concern		w/s		B	4
Diptera	Rhagionidae – Snipeflies	Chrysopilus cristatus	Black Snipefly	none	Least Concern		g		AB	67
Diptera	Rhagionidae	Rhagio scolopaceus	Downlooker Snipefly	none	Least Concern		s		A	6
Diptera	Scathophagidae – Dung Flies	Cordilura ciliata	Ciliate Cordilura	none	not yet evaluated		w		A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Scathophagidae	Scathophaga furcata	Furcate Dung Fly	none	not yet evaluated			dung	B	4
Diptera	Scathophagidae	Scathophaga stercoraria	Yellow Dung Fly	none	not yet evaluated			dung	A	4
Diptera	Sciomyzidae – Snailkilling Flies	Elgiva solicita	Brown S-veined Snailkiller	none	not yet evaluated		w		B	4
Diptera	Sciomyzidae	Ilione albiseta	Six-spotted Snailkiller	none	not yet evaluated		w		AB	69
Diptera	Sciomyzidae	Ilione lineata	White-banded Musselkiller	none	not yet evaluated		w		B	6
Diptera	Sciomyzidae	Pherbellia schoenherri	Spot-winged Little Snailkiller	none	not yet evaluated		w		AB	4
Diptera	Sciomyzidae	Pherbina coryleti	Net-winged Snailkiller	none	not yet evaluated		w		B	6
Diptera	Sciomyzidae	Sepedon sphegea	Blue Long-horned Snailkiller	none	not yet evaluated		w		B	10
Diptera	Sciomyzidae	Tetanocera ferruginea	Common Buff Snailkiller	none	not yet evaluated		w		AB	67
Diptera	Sepsidae – Ensign Flies	Sepsis fulgens		none	not yet evaluated				B	7
Diptera	Sphaeroceridae – Lesser Dung Flies	Crumomyia pedestris		none	not yet evaluated				B	10
Diptera	Stratiomyidae – Soldierflies	Beris chalybata	Murky-legged Black Legionnaire	none	Least Concern		s		A	4
Diptera	Stratiomyidae	Beris vallata	Common Orange Legionnaire	none	Least Concern		s		AB	67
Diptera	Stratiomyidae	Chloromyia formosa	Broad Centurion	none	Least Concern		g	dung	AB	67
Diptera	Stratiomyidae	Microchrysa flavicornis	Green Gem	none	Least Concern				B	6
Diptera	Stratiomyidae	Nemotelus pantherinus	Fen Snout	none	Least Concern		w		AB	67
Diptera	Stratiomyidae	Odontomyia argentata	Silver Colonel	Nationally Scarce	Least Concern		w		A	4
Diptera	Stratiomyidae	Oxycera nigricornis	Delicate Soldier	none	Least Concern		w		B	6
Diptera	Stratiomyidae	Oxycera rara	Four-barred Major	none	Least Concern		w		B	6
Diptera	Stratiomyidae	Pachygaster atra	Dark-winged Black	none	Least Concern		s		AB	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Stratiomyidae	Sargus flavipes	Yellow-legged Centurion	none	Least Concern			dung etc	AB	9,10
Diptera	Stratiomyidae	Stratiomys potamida	Banded General	none	Least Concern		w		B	7
Diptera	Syrphidae – Hoverflies	Cheilosia fraterna	Orange-shinned Blacklet	none	Least Concern		w	marsh thistle	A	4
Diptera	Syrphidae	Chrysotoxum bicinctum	Two-banded Spearhorn	none	Least Concern				B	7
Diptera	Syrphidae	Dasysyrphus venustus sensu stricto	Broad-barred Fleckwing	none	Least Concern				A	6
Diptera	Syrphidae	Epistrophe eligans	Early Epistrophe	none	Least Concern		s		AB	4
Diptera	Syrphidae	Episyrphus balteatus	Marmalade Hoverfly	none	Least Concern				AB	67
Diptera	Syrphidae	Eristalis nemorum	Stripe-faced Dronefly	none	Least Concern				B	9
Diptera	Syrphidae	Eristalis pertinax	Tapered Dronefly	none	Least Concern				AB	4,10
Diptera	Syrphidae	Eristalis tenax	Common Dronefly	none	Least Concern				AB	7
Diptera	Syrphidae	Eumerus strigatus	Lesser Bulb-Fly	none	Least Concern				B	57
Diptera	Syrphidae	Helophilus pendulus	The Footballer	none	Least Concern		w		AB	467,10
Diptera	Syrphidae	Leucozona lucorum	Blotch-winged Hoverfly	none	Least Concern				A	6
Diptera	Syrphidae	Melanogaster hirtella	Common Marsh Hoverfly	none	Least Concern		w		A	6
Diptera	Syrphidae	Melanostoma mellinum	Short Melanostoma	none	Least Concern				AB	467
Diptera	Syrphidae	Neoascia tenur	Bridged Clubtail	none	Least Concern		w		B	4
Diptera	Syrphidae	Pipizella viduata		none	Least Concern				B	7
Diptera	Syrphidae	Platycheirus albimanus	Grey-spotted Boxer	none	Least Concern				A	49
Diptera	Syrphidae	Platycheirus angustatus	Slender Boxer	none	Least Concern				A	7
Diptera	Syrphidae	Platycheirus clypeatus	Marsh Boxer	none	Least Concern		w		A	47
Diptera	Syrphidae	Platycheirus fulviventris	Orange-legged Boxer	none	Least Concern		w		A	9

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Syrphidae	Platycheirus occultus	Dusky Marsh Boxer	none	Least Concern		w		A	67
Diptera	Syrphidae	Sphaerophoria scripta	Common Twist-tail	none	Least Concern		g		B	479
Diptera	Syrphidae	Syritta pipiens	Thick-legged Hoverfly	none	Least Concern		g		B	7
Diptera	Syrphidae	Syrphus ribesii	Humming Syrphus	none	Least Concern				AB	46
Diptera	Syrphidae	Tropidia scita	Tooth-thighed Hoverfly	none	Least Concern		w		A	6
Diptera	Syrphidae	Volucella pellucens	Pied Plumehorn	none	Least Concern				A	7
Diptera	Syrphidae	Xanthogramma pedissequum sensu stricto	Superb Ant-hill Hoverfly	none	Least Concern				A	6
Diptera	Syrphidae	Xylota segnis	Orange-belted Leaf Licker	none	Least Concern		s	dead wood	A	67
Diptera	Tabanidae – Horseflies, Clegs etc	Chrysops caecutiens	Splayed Deerfly	none	Least Concern			mammals	A	6
Diptera	Tabanidae	Chrysops relictus	Twin-lobed Deerfly	none	Least Concern			mammals	A	6
Diptera	Tabanidae	Haematopota pluvialis	Notch-horned Cleg	none	Least Concern			mammals	AB	67
Diptera	Tabanidae	Tabanus maculicornis	Narrow-winged Horsefly	Nationally Scarce	Least Concern		w		A	6
Diptera	Tachinidae – Tachinid Flies	Gymnocheta viridis		none	not yet evaluated		s		A	4
Diptera	Tachinidae	Tachina fera		none	not yet evaluated				B	9
Diptera	Tephritidae – Picture-winged Flies	Anomoia purmunda		none	not yet evaluated		s	hawthorn	A	7
Diptera	Tephritidae	Urophora cardui		none	not yet evaluated		g	creeping thistle	AB	79
Diptera	Tephritidae	Urophora stylata		none	not yet evaluated		g	spear thistle	B	6
Diptera	Therevidae	Thereva bipunctata	Twin-spot Stiletto	none	not yet evaluated		h		B	67
Diptera	Tipulidae	Nephrotoma analis	Dark-tipped Tiger	none	not yet evaluated		w		B	7
Diptera	Tipulidae	Nephrotoma appendiculata	Inverted-U Tiger	none	not yet evaluated		g		A	4

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Diptera	Tipulidae	Nephrotoma flavescens	Primrose Tiger	none	not yet evaluated		g		AB	7
Diptera	Tipulidae	Nephrotoma quadrifaria	Wing-band Tiger	none	not yet evaluated		s		B	7
Diptera	Tipulidae	Nigrotipula nigra	Chocolate Long-palp	none	not yet evaluated		w		A	7
Diptera	Tipulidae	Tipula cava	White-blistered Long-palp	none	not yet evaluated		h		B	7
Diptera	Tipulidae	Tipula fascipennis	White-barred Long-palp	none	not yet evaluated		s		B	7
Diptera	Tipulidae	Tipula lateralis	Common Yam	none	not yet evaluated		w		B	67
Diptera	Tipulidae	Tipula luna	Golden-tufted Grey Long-palp	none	not yet evaluated		w		B	46
Diptera	Tipulidae	Tipula lunata	Tabbed Orange Long-palp	none	not yet evaluated				B	7
Diptera	Tipulidae	Tipula luteipennis	Yellow-winged Long-palp	none	not yet evaluated		w		B	9
Diptera	Tipulidae	Tipula maxima	Giant Long-palp	none	not yet evaluated		w		B	46
Diptera	Tipulidae	Tipula oleracea	Marsh White-stripe	none	not yet evaluated				AB	47
Diptera	Tipulidae	Tipula paludosa	Meadow White-stripe	none	not yet evaluated		w		AB	9
Diptera	Tipulidae	Tipula scripta	Common Saw-tailed Mottle	none	not yet evaluated		s		B	7
Diptera	Tipulidae	Tipula unca	Double-U Long-palp	none	not yet evaluated		w/s		B	6
Diptera	Tipulidae	Tipula vittata	Twin-striped Grey Long-palp	none	not yet evaluated		w/s		AB	4
Diptera	*unknown*	*Diptera larvae*					*a*		A(I)B(P1,P2)	4
Ephemeroptera – MAYFLIES	Baetidae	*Baetidae nymph*					*a*		A(I,D1) B(P2)	4
Ephemeroptera	Ephemeridae	Ephemera danica	Green Drake	none			w/a		AB	67
Ephemeroptera	*unknown*	*Ephemeroptera nymphs*					*a*		B(P1)	4
Geophilomorpha – CENTIPEDES (part)	Geophilidae	Geophilus easoni		none					B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera – TRUE BUGS	Acanthosomatidae – Shieldbugs (part)	Acanthosoma haemorrhoidale	Hawthorn Shieldbug	none	Least Concern		s	hawthorn	AB	9
Hemiptera	Anthocoridae – Flower Bugs	Anthocoris confusus		none	not yet evaluated		s		B	7
Hemiptera	Anthocoridae	Anthocoris nemoralis		none	not yet evaluated		s		AB	46
Hemiptera	Anthocoridae	Anthocoris nemorum	Common Flower Bug	none	not yet evaluated				AB	4679,10
Hemiptera	Anthocoridae	Anthocoris simulans		none	not yet evaluated		s	ash	A	7
Hemiptera	Anthocoridae	Cardiastethus fasciiventris		none	not yet evaluated		s		AB	4
Hemiptera	Anthocoridae	Temnostethus gracilis		none	not yet evaluated		s		AB	47
Hemiptera	Anthocoridae	Temnostethus pusillus		none	not yet evaluated		s		AB	6,10
Hemiptera	Aphrophoridae – Froghoppers	Aphrophora alni		none	not yet evaluated		s		A	7
Hemiptera	Aphrophoridae	Aphrophora salicina		none	not yet evaluated		s	willows	B	7
Hemiptera	Aphrophoridae	Neophilaenus lineatus		none	not yet evaluated		g		B	7
Hemiptera	Aphrophoridae	Philaenus spumarius	Common Froghopper	none	not yet evaluated		g		AB	79,10
Hemiptera	Aradidae – Flatbugs	Aneurus avenius		none	not yet evaluated		s	dead wood	A	46
Hemiptera	Berytidae – Stiltbugs	Neides tipularius		none	not yet evaluated		h		B	6
Hemiptera	Cercopidae – Cercopid Froghoppers	Cercopis vulnerata	Red-and-black Froghopper	none	not yet evaluated		g		A	6
Hemiptera	Cicadellidae – Leafhoppers	Allygus mixtus		none	not yet evaluated		s		AB	79
Hemiptera	Cicadellidae	Anoscopus albifrons		none	not yet evaluated		g		B	7
Hemiptera	Cicadellidae	Anoscopus histrionicus		none	not yet evaluated		g		B	6
Hemiptera	Cicadellidae	Aphrodes makarovi		none	not yet evaluated		g		A	7
Hemiptera	Cicadellidae	Cicadella viridis		none	not yet evaluated		w		AB	79,10

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Hemiptera	Cicadellidae	Cicadula persimilis		none	not yet evaluated		g		A	6
Hemiptera	Cicadellidae	Cicadula quadrinotata		none	not yet evaluated		w	rushes, sedges	B	67
Hemiptera	Cicadellidae	Errastunus ocellaris		none	not yet evaluated		g		A	6
Hemiptera	Cicadellidae	Erzaleus metrius		none	not yet evaluated		w	reed canary grass	A	7
Hemiptera	Cicadellidae	Eupteryx aurata		none	not yet evaluated			stinging nettle	A	6
Hemiptera	Cicadellidae	Eupteryx urticae		none	not yet evaluated			stinging nettle	A	6
Hemiptera	Cicadellidae	Euscelis incisus		none	not yet evaluated		g		AB	47
Hemiptera	Cicadellidae	Evacanthus acuminatus		none	not yet evaluated				A	7
Hemiptera	Cicadellidae	Fagocyba carri		none	not yet evaluated		s	oak	B	10
Hemiptera	Cicadellidae	Iassus lanio		none	not yet evaluated		s	oak	B	7,10
Hemiptera	Cicadellidae	Idiocerus stigmaticalis		none	not yet evaluated		s	willows	B	7
Hemiptera	Cicadellidae	Kybos smaragdula		none	not yet evaluated			alder mainly	A	6
Hemiptera	Cicadellidae	Macropsis prasina		none	not yet evaluated			sallows	A	7
Hemiptera	Cicadellidae	Macropsis scotti		none	not yet evaluated			bramble	A	7
Hemiptera	Cicadellidae	Macrosteles sardus		none	not yet evaluated	YES			A	6
Hemiptera	Cicadellidae	Macrosteles viridigriseus		none	not yet evaluated		w		AB	6
Hemiptera	Cicadellidae	Macustus grisescens		none	not yet evaluated		g		A	6
Hemiptera	Cicadellidae	Metidiocerus rutilans		none	not yet evaluated			sallows	AB	4
Hemiptera	Cicadellidae	Oncopsis alni		none	not yet evaluated		s	alders	A	6
Hemiptera	Cicadellidae	Ophiola decumana		Nationally Scarce (Notable B)	not yet evaluated		h		B	6
Hemiptera	Cicadellidae	Populicerus albicans		none	not yet evaluated			poplars	B	7
Hemiptera	Cicadellidae	Psammotettix confinis		none	not yet evaluated		g	grasses	AB	67,10
Hemiptera	Cicadellidae	Rhopalopyx elongata		none	not yet evaluated				B	10
Hemiptera	Cicadellidae	Streptanus sordidus		none	not yet evaluated		g		A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Cicadellidae	Tremulicerus fulgidus		Nationally Scarce (Notable A)	not yet evaluated			poplars	B	7
Hemiptera	Cixiidae – Lacehoppers	Cixius nervosus		none	not yet evaluated		s		B	7
Hemiptera	Coreidae – Leatherbugs	Arenocoris falleni	Fallen's Leatherbug	Nationally Scarce	Least Concern		h	common stork's-bill	B	67
Hemiptera	Coreidae	Coreus marginatus	Dock Bug	none	Least Concern			docks	AB	4679,10
Hemiptera	Coreidae	Coriomeris denticulatus	Denticulate Leatherbug	none	Least Concern		h	Leguminosae including black medick	B	7
Hemiptera	Coreidae	Gonocerus acuteangulatus	Box Bug	none	Least Concern		s		B	7
Hemiptera	Coreidae	Spathocera dalmanii	Dalman's Leatherbug	Nationally Scarce	Least Concern		h	sheep's sorrel	B	6
Hemiptera	Coreidae	Syromastus rhombeus	Rhombic Leatherbug	none	Least Concern		h	Caryophyllaceae	B	7
Hemiptera	Corixidae – Waterboatmen	Corixa punctata	Common Water Boatman	none	Least Concern		a		A(D1)	4
Hemiptera	Corixidae	Hesperocorixa linnaei		none	Least Concern		a		B(P1)	4
Hemiptera	Corixidae	Hesperocorixa sahlbergi		none	Least Concern		a		A	7
Hemiptera	Corixidae	Paracorixa concinna		none	Least Concern		a		B	7
Hemiptera	Corixidae	Sigara iactans		none	Least Concern		a		B	7
Hemiptera	Corixidae	Sigara lateralis		none	Least Concern		a		AB	7
Hemiptera	Cydnidae	Legnotus limbosus	Bordered Shieldbug	none	Least Concern		g	Galium sp	A	4
Hemiptera	Cydnidae	Sehirus luctuosus	Forget-me-not Shieldbug	none	Least Concern		g	Forget-me-not	B	7
Hemiptera	Cydnidae	Tritomegas bicolor	Pied Shieldbug	none	Least Concern		g	white deadnettle	A	47
Hemiptera	Delphacidae – Planthoppers	Conomelus anceps		none	not yet evaluated		w	Juncus	B	57
Hemiptera	Delphacidae	Florodelphax leptosoma		none	not yet evaluated		w		B	45,10
Hemiptera	Delphacidae	Javesella obscurella		none	not yet evaluated	YES	w		A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Delphacidae	Megamelodes lequesnei		Nationally Scarce (Notable B)	not yet evaluated	YES	w		B	10
Hemiptera	Delphacidae	Paraliburnia adela		none	not yet evaluated		w	Glyceria	A	6
Hemiptera	Delphacidae	Stenocranus fuscovittatus		Nationally Scarce (Notable B)	not yet evaluated	YES	w	sedges and grasses	A	4
Hemiptera	Delphacidae	Stenocranus major		none	not yet evaluated		g		A	47
Hemiptera	Gerridae – Pondskaters	Gerris lateralis		none	Least Concern		a		A(D1)	4
Hemiptera	Lygaeidae – Groundbugs	Cymus claviculus		none	not yet evaluated		h	toad rush, knotgrass	B	7
Hemiptera	Lygaeidae	Cymus melanocephalus		none	not yet evaluated		w		AB	6
Hemiptera	Lygaeidae	Drymus sylvaticus		none	not yet evaluated				A	4
Hemiptera	Lygaeidae	Heterogaster urticae	Nettle Groundbug	none	not yet evaluated			stinging nettle	A	4
Hemiptera	Lygaeidae	Ischnodemus sabuleti	European Cinchbug	none	not yet evaluated		g/w	grasses and reeds	AB	4679,11
Hemiptera	Lygaeidae	Kleidocerys resedae	Birch Catkin Bug	none	not yet evaluated		s	birches mainly	AB	46,10
Hemiptera	Lygaeidae	Megalonotus antennatus		Nationally Scarce (Notable B)	not yet evaluated		g		A	6
Hemiptera	Lygaeidae	Megalonotus chiragra		none	not yet evaluated		h		B	6
Hemiptera	Lygaeidae	Megalonotus praetextatus		Nationally Scarce (Notable B)	not yet evaluated		h		B	7
Hemiptera	Lygaeidae	Megalonotus sabulicola		Nationally Scarce (Notable B)	not yet evaluated		h		B	7,10
Hemiptera	Lygaeidae	Nysius graminicola		[Nationally Rare (Red Data Book 3)]	not yet evaluated	YES	h		B	9
Hemiptera	Lygaeidae	Nysius huttoni		none	not yet evaluated		h		B	679
Hemiptera	Lygaeidae	Nysius senecionis		none	not yet evaluated		g	ragworts etc	B	9

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Lygaeidae	Scolopostethus grandis		none	not yet evaluated				A	11
Hemiptera	Lygaeidae	Scolopostethus thomsoni		none	not yet evaluated				AB	9
Hemiptera	Lygaeidae	Stygnocoris fuligineus		none	not yet evaluated		g		B	4
Hemiptera	Lygaeidae	Trapezonotus arenarius		none	not yet evaluated		h		B	679
Hemiptera	Lygaeidae	Trapezonotus desertus		none	not yet evaluated		h		B	5
Hemiptera	Microphysidae – Minute Bladder Bugs	Loricula elegantula		none	not yet evaluated		s	lichens on trees	AB	67
Hemiptera	Microphysidae	Loricula pselaphiformis		none	not yet evaluated		s	lichens	A	6
Hemiptera	Miridae – Plant Bugs or Capsid Bugs	Amblytylus nasutus		none	not yet evaluated		g		B	67
Hemiptera	Miridae	Atractotomus mali		none	not yet evaluated		s	hawthorn, apple	AB	67
Hemiptera	Miridae	Blepharidopterus angulatus	Black-kneed Capsid	none	not yet evaluated		s	birch, alder etc	A	7
Hemiptera	Miridae	Campyloneura virgula		none	not yet evaluated		s		AB	7
Hemiptera	Miridae	Capsus ater		none	not yet evaluated		g		AB	67
Hemiptera	Miridae	Capsus wagneri		Nationally Scarce (Notable B)	not yet evaluated	YES	w		A	6
Hemiptera	Miridae	Closterotomus norwegicus		none	not yet evaluated		g		AB	67
Hemiptera	Miridae	Cyllecoris histrionius		none	not yet evaluated		s	oaks	B	6
Hemiptera	Miridae	Deraeocoris flavilinea		none	not yet evaluated		s		AB	6
Hemiptera	Miridae	Deraeocoris lutescens		none	not yet evaluated		s	oaks mainly	AB	479,10
Hemiptera	Miridae	Deraeocoris ruber		none	not yet evaluated				AB	7
Hemiptera	Miridae	Dicyphus epilobii		none	not yet evaluated		g/w	hairy willowherb	AB	69
Hemiptera	Miridae	Halticus luteicollis		none	not yet evaluated			bedstraws, white bryony	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Miridae	Heterocordylus tibialis		none	not yet evaluated		h	broom	B	6
Hemiptera	Miridae	Heterotoma planicornis		none	not yet evaluated				AB	67
Hemiptera	Miridae	Leptopterna dolabrata	Meadow Plant Bug	none	not yet evaluated		g	Poaceae	AB	67
Hemiptera	Miridae	Liocoris tripustulatus		none	not yet evaluated			stinging nettle	AB	4679,10
Hemiptera	Miridae	Lygocoris pabulinus	Common Green Capsid	none	not yet evaluated				AB	67
Hemiptera	Miridae	Lygocoris rugicollis		none	not yet evaluated			willows	A	6
Hemiptera	Miridae	Lygus rugulipennis	Tarnished Plant Bug	none	not yet evaluated				A	4
Hemiptera	Miridae	Macrotylus horvathi		none	not yet evaluated			black horehound	B	7
Hemiptera	Miridae	Megaloceroea recticornis		none	not yet evaluated		g	Poaceae	B	7
Hemiptera	Miridae	Megalocoleus molliculus		none	not yet evaluated		g	yarrow	B	7
Hemiptera	Miridae	Miris striatus		none	not yet evaluated		s	hawthorn	AB	4
Hemiptera	Miridae	Neolygus contaminatus		none	not yet evaluated		s	birch	A	6
Hemiptera	Miridae	Notostira elongata		none	not yet evaluated		g	Poaceae	A	67
Hemiptera	Miridae	Oncotylus viridiflavus		none	not yet evaluated		g	knapweeds	B	7
Hemiptera	Miridae	Orthonotus rufifrons		none	not yet evaluated		s	stinging nettle	B	7
Hemiptera	Miridae	Orthops campestris		none	not yet evaluated			umbellifers	B	7
Hemiptera	Miridae	Orthotylus concolor		none	not yet evaluated		h	gorse	B	6
Hemiptera	Miridae	Orthotylus marginalis		none	not yet evaluated		s	willows	AB	6
Hemiptera	Miridae	Orthotylus tenellus		none	not yet evaluated		s	oaks, ash, hazel	B	6
Hemiptera	Miridae	Phylus melanocephalus		none	not yet evaluated		s	oak	B	6
Hemiptera	Miridae	Phytocoris longipennis		none	not yet evaluated		s		A	7
Hemiptera	Miridae	Phytocoris ulmi		none	not yet evaluated		s		A	7
Hemiptera	Miridae	Pilophorus perplexus		none	not yet evaluated		s	oak	B	7
Hemiptera	Miridae	Pinalitus cervinus		none	not yet evaluated		s	hazel, ash, ivy	AB	67,10
Hemiptera	Miridae	Pithanus maerkelii		none	not yet evaluated		g		A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Miridae	Plagiognathus arbustorum		none	not yet evaluated			often stinging nettles	AB	67
Hemiptera	Miridae	Plagiognathus chrysanthemi		none	not yet evaluated		g		B	7
Hemiptera	Miridae	Polymerus nigrita		none	not yet evaluated			Galium sp	B	7
Hemiptera	Miridae	Psallus ambiguus		none	not yet evaluated		s	alder, hawthorn, sallows etc	A	6
Hemiptera	Miridae	Psallus lepidus		none	not yet evaluated		s	ash	A	7
Hemiptera	Miridae	Psallus perrisi		none	not yet evaluated		s	oak	AB	6
Hemiptera	Miridae	Psallus varians		none	not yet evaluated		s	oak	AB	6
Hemiptera	Miridae	Psallus wagneri		none	not yet evaluated		s	oak	AB	6
Hemiptera	Miridae	Rhabdomiris striatellus		none	not yet evaluated		s	oak	B	46
Hemiptera	Miridae	Salicarus roseri		none	not yet evaluated		w	willows	A	7
Hemiptera	Miridae	Stenodema calcarata		none	not yet evaluated			Poaceae	AB	46
Hemiptera	Miridae	Stenodema laevigata		none	not yet evaluated			Poaceae	AB	49
Hemiptera	Miridae	Stenotus binotatus		none	not yet evaluated		g	Poaceae	AB	67
Hemiptera	Miridae	Teratocoris antennatus		none	not yet evaluated		w	Club-rushes	AB	67
Hemiptera	Nabidae – Damselbugs	Himacerus apterus	Tree Damsel Bug	none	not yet evaluated		s		A	89
Hemiptera	Nabidae	Himacerus major		none	not yet evaluated		g		A	9
Hemiptera	Nabidae	Himacerus mirmicoides	Ant Damsel Bug	none	not yet evaluated		g		B	10
Hemiptera	Nabidae	Nabis ferus	Field Damsel Bug	none	not yet evaluated				B	49,10
Hemiptera	Nabidae	Nabis limbatus	Marsh Damsel Bug	none	not yet evaluated		g/w		B	7
Hemiptera	Nabidae	Nabis rugosus	Common Damsel Bug	none	not yet evaluated				AB	469,10,11
Hemiptera	Nepidae – Water Scorpions	Nepa cinerea	Water Scorpion	none	Least Concern		a		A(D2) B(P1,ditch)	4579
Hemiptera	Notonectidae –	Notonecta glauca	Common	none	Least Concern		a		A(D1)	4

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
	Backswimmers		Backswimmer							
Hemiptera	Pentatomidae – Shieldbugs (part)	Aelia acuminata	Bishop's Mitre	none	Least Concern		g	Poaceae	A	679
Hemiptera	Pentatomidae	Dolycoris baccarum	Hairy Shieldbug	none	Least Concern				B	9
Hemiptera	Pentatomidae	Eurydema oleracea	Crucifer Shieldbug	none	Least Concern			Brassicaceae	A	6
Hemiptera	Pentatomidae	Palomena prasina	Green Shieldbug	none	Least Concern				AB	479,10
Hemiptera	Pentatomidae	Pentatoma rufipes	Red-legged Shieldbug	none	Least Concern		s		AB	7
Hemiptera	Pentatomidae	Picromerus bidens	Spiked Shieldbug	none	Least Concern		w		B	9
Hemiptera	Pentatomidae	Podops inunctus	Turtle Shieldbug	none	Least Concern		g		A	6,11
Hemiptera	Pentatomidae	Troilus luridus	Bronze Shieldbug	none	Least Concern		s		A	9
Hemiptera	Pentatomidae	Zicrona caerulea	Blue Shieldbug	none	Least Concern		w		A	4
Hemiptera	Pleidae – Pygmy Backswimmers	Plea minutissima		none	Least Concern		a		A(D1) B(P1)	4
Hemiptera	Rhopalidae – Rhopalid Bugs	Corizus hyoscyami		none	Least Concern		g		B	9
Hemiptera	Rhopalidae	Rhopalus parumpunctatus		Nationally Scarce	Least Concern		g		B	7
Hemiptera	Rhopalidae	Stictopleurus abutilon		none	Least Concern		g		B	79
Hemiptera	Saldidae – Shorebugs	Chartoscirta cincta		none	Least Concern		w		A	46,11
Hemiptera	Saldidae	Saldula saltatoria	Common Shore Bug	none	Least Concern		w		AB	456
Hemiptera	Scutelleridae – Tortoise Shielbugs	Eurygaster testudinaria	Tortoise Shieldbug	none	Least Concern		g		AB	679,10
Hemiptera	Scutelleridae	Odontoscelis lineola	Lesser-streaked Shieldbug	Nationally Scarce	Least Concern		h	common stork's-bill	B	56
Hemiptera	Tingidae – Lacebugs	Acalypta parvula		none	not yet evaluated			lichens	B	56
Hemiptera	Tingidae	Agramma laetum		none	not yet evaluated			rushes, sedges	B	4
Hemiptera	Tingidae	Dictyla convergens		none	not yet evaluated		w	water forget-me-not	B	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hemiptera	Tingidae	Kalama tricornis		none	not yet evaluated		h		B	6
Hemiptera	*Tingidae*	*Physatocheila dumetorum agg.*					s		AB	49
Hemiptera	Tingidae	Tingis ampliata		none	not yet evaluated			thistles	AB	46
Hemiptera	Veliidae – Water Crickets	Velia caprai		none	Least Concern		a		A(D2)	4
Hymenoptera – BEES, WASPS, ANTS, SAWFLIES	Andrenidae – Mining Bees	Andrena dorsata	Short-fringed Mining Bee	none	not yet evaluated				A	4
Hymenoptera	Andrenidae	Andrena fulva	Tawny Mining Bee	none	not yet evaluated				B	4
Hymenoptera	Andrenidae	Andrena scotica	Chocolate Mining Bee	none	not yet evaluated				B	4
Hymenoptera	Apidae – Honey Bees, Bumblebees and allies	Apis mellifera	Western Honey Bee	none	not yet evaluated				AB	4679
Hymenoptera	Apidae	Bombus hypnorum	Tree Bumblebee	none	not yet evaluated				AB	67,10
Hymenoptera	Apidae	Bombus lapidarius	Red-tailed Bumblebee	none	not yet evaluated				AB	4679
Hymenoptera	Apidae	Bombus pascuorum	Common Carder Bee	none	not yet evaluated				AB	4679
Hymenoptera	Apidae	Bombus pratorum	Early Bumblebee	none	not yet evaluated				B	7
Hymenoptera	Apidae	Bombus terrestris	Buff-tailed Bumblebee	none	not yet evaluated				AB	479
Hymenoptera	Apidae	Nomada panzeri	Panzer's Nomad Bee	none	not yet evaluated				B	4
Hymenoptera	Cephidae – Stem-boring Sawflies	Cephus pygmeus	Wheat Stem Borer	none	not yet evaluated		g	grasses and buttercups	AB	6
Hymenoptera	Chrysididae – Cuckoo Wasps/Ruby-tailed Wasps	Hedychridium roseum		none	not yet evaluated		h		B	7
Hymenoptera	Chrysididae	Hedychrum niemelai		Nationally Rare (Red Data Book 3)	not yet evaluated		h		B	7
Hymenoptera	Chrysididae	Pseudomalus auratus		none	not yet evaluated				B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hymenoptera	Colletidae – Plasterer Bees etc	Colletes hederae	Ivy Bee	none	not yet evaluated		s	ivy	AB	9,10
Hymenoptera	Crabronidae – Digger Wasps	Cerceris quinquefasciata	Five-banded Weevil Fox	Nationally Rare (Red Data Book 3), s.41 NERC	not yet evaluated		h		B	7
Hymenoptera	Crabronidae	Crabro cribrarius	Large Shield Wasp	none	not yet evaluated		h		B	7
Hymenoptera	Crabronidae	Entomognathus brevis		none	not yet evaluated		h		B	7
Hymenoptera	Formicidae – Ants	Formica fusca	Dusky Ant	none	not yet evaluated				B	4
Hymenoptera	Formicidae	Formica lemani		none	not yet evaluated				A	6
Hymenoptera	Formicidae	Lasius brunneus	Brown Tree Ant	Nationally Scarce (Notable A)	not yet evaluated		s		AB	46
Hymenoptera	Formicidae	Lasius flavus	Yellow Meadow Ant	none	not yet evaluated		g		B	7
Hymenoptera	Formicidae	Lasius fuliginosus	Jet Ant	none	not yet evaluated		s		B	10
Hymenoptera	*Formicidae*	*Lasius niger sens. lat.*							*AB*	*4567*
Hymenoptera	Formicidae	Myrmica ruginodis		none	not yet evaluated				B	57
Hymenoptera	Formicidae	Temnothorax nylanderi		none	not yet evaluated		s		AB	6
Hymenoptera	Halictidae – Sweat Bees, Blood Bees etc	Lasioglossum calceatum	Common Furrow Bee	none	not yet evaluated				A	4
Hymenoptera	Halictidae	Sphecodes geoffrellus	Geoffroy's Blood Bee	none	not yet evaluated				B	7
Hymenoptera	Halictidae	Sphecodes monilicornis	Box-headed Blood Bee	none	not yet evaluated				B	7
Hymenoptera	Melittidae – Melittid Bees	Dasypoda hirtipes	Pantaloon Bee	Nationally Scarce (Notable B)	not yet evaluated		h		B	7
Hymenoptera	Tenthredinidae – Sawflies (part)	Aglaostigma aucupariae		none	not yet evaluated			Galium sp	A	4
Hymenoptera	Tenthredinidae	Ametastegia glabrata		none	not yet evaluated				A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hymenoptera	Tenthredinidae	Athalia circularis		none	not yet evaluated				B	6
Hymenoptera	Tenthredinidae	Athalia lugens		none	not yet evaluated			Cruciferae	B	9
Hymenoptera	Tenthredinidae	Athalia rosae	Turnip Sawfly	none	not yet evaluated			Cruciferae	AB	79
Hymenoptera	Tenthredinidae	Birka cinereipes		none	not yet evaluated		w	water forget-me-not	AB	4
Hymenoptera	Tenthredinidae	Dolerus aeneus		none	not yet evaluated		g	grasses	A	4
Hymenoptera	Tenthredinidae	Dolerus aericeps		none	not yet evaluated		w	horsetails	B	6
Hymenoptera	Tenthredinidae	Dolerus bimaculatus		none	not yet evaluated		w	horsetails	B	4
Hymenoptera	Tenthredinidae	Dolerus gonager		none	not yet evaluated		g	grasses	A	4
Hymenoptera	Tenthredinidae	Dolerus nigratus		none	not yet evaluated		g	grasses	A	4
Hymenoptera	Tenthredinidae	Dolerus pratensis		none	not yet evaluated		w	horsetails	B	4
Hymenoptera	Tenthredinidae	Dolerus stygius		none	not yet evaluated		w	sedges	B	4
Hymenoptera	Tenthredinidae	Dolerus vestigialis		none	not yet evaluated		w	horsetails	A	6
Hymenoptera	Tenthredinidae	Eutomostethus ephippium		none	not yet evaluated		g	grasses	B	7
Hymenoptera	Tenthredinidae	Euura oligospilus		none	not yet evaluated			willows	A	4
Hymenoptera	Tenthredinidae	Euura viduatus		none	not yet evaluated			willows	B	4
Hymenoptera	Tenthredinidae	Hoplocampa chrysorrhoea		none	not yet evaluated		s	blackthorn	AB	4
Hymenoptera	Tenthredinidae	Macrophya duodecimpunctata		none	not yet evaluated		w	sedges and grasses	A	6
Hymenoptera	Tenthredinidae	Pachyprotasis rapae		none	not yet evaluated				A	4
Hymenoptera	Tenthredinidae	Pristiphora armata		none	not yet evaluated		s	hawthorn	AB	4
Hymenoptera	Tenthredinidae	Pristiphora pallidiventris		none	not yet evaluated				A	4
Hymenoptera	Tenthredinidae	Rhogogaster chlorosoma		none	not yet evaluated				A	7
Hymenoptera	Tenthredinidae	Rhogogaster scalaris		none	not yet evaluated				A	6
Hymenoptera	Tenthredinidae	Tenthredo baetica		none	not yet evaluated			Brassicaceae	A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Hymenoptera	Tenthredinidae	Tenthredo mesomela		none	not yet evaluated				A	6
Hymenoptera	Tenthredinidae	Tenthredo notha		none	not yet evaluated		g	Fabaceae	B	7
Hymenoptera	Vespidae – Social Wasps	Vespa crabro	Hornet	none	not yet evaluated		s		A	9
Hymenoptera	Vespidae	Vespula germanica	German Wasp	none	not yet evaluated				B	7
Hymenoptera	Vespidae	Vespula vulgaris	Common Wasp	none	not yet evaluated				AB	479,10
Isopoda – WOODLICE	Armadillidiidae – Pill Woodlice	Armadillidium vulgare	Common Pill Woodlouse	none	Least Concern				AB	4567
Isopoda	Asellidae – Water-slaters	Asellus aquaticus	Two-spotted Water-slater	none	Least Concern		a		A(D1, D2)B(P1,P2)	4
Isopoda	Oniscidae – Woodlice (part)	Oniscus asellus	Common Shiny Woodlouse	none	Least Concern				B	5
Isopoda	Philosciidae – Woodlice (part)	Philoscia muscorum	Common Striped Woodlouse	none	Least Concern				AB	47,10,11
Isopoda	Porcellionidae – Woodlice (part)	Porcellio scaber	Common Rough Woodlouse	none	Least Concern				B	567
Ixodida – TICKS	Ixodidae – Ticks (part)	Ixodes ricinus	Sheep Tick	none				mammals and birds	A	6
Julida – SNAKE MILLIPEDES	Julidae – Snake Millipedes	Ophyiulus pilosus		none	Least Concern				B	5
Lepidoptera – MOTHS and BUTTERFLIES	Alucitidae – Many-plumed Moths	Alucita hexadactyla	Twenty-plume Moth	none	not yet evaluated			honeysuckle	B	7
Lepidoptera	Choreutidae – Metalmark Moths	Anthophila fabriciana	Nettle Tap	none	not yet evaluated			stinging nettle	AB	67
Lepidoptera	Cosmopterigidae – Cosmet Moths	Limnaecia phragmitella	Bulrush Cosmet	none	not yet evaluated		w	*Typha*	AB	7
Lepidoptera	Cossidae – Cossid Moths	Zeuzera pyrina	Leopard Moth	none	Least Concern		s	dead wood	B	7
Lepidoptera	Crambidae – Grass Moths	Acentria ephemerella	Water Veneer	none	not yet evaluated		a		B	7
Lepidoptera	Crambidae	Agriphila inquinatella	Barred Grass-veneer	none	not yet evaluated		g	Poaceae	B	7
Lepidoptera	Crambidae	Agriphila straminella	Straw Grass-veneer	none	not yet evaluated		g	Poaceae	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Crambidae	Anania coronata	Spotted Magpie	none	not yet evaluated		s	elder	B	7
Lepidoptera	Crambidae	Anania hortulata	Small Magpie	none	not yet evaluated			labiates and bindweeds	AB	7
Lepidoptera	Crambidae	Anania perlucidalis	Fenland Pearl	none	not yet evaluated			thistles	AB	7
Lepidoptera	Crambidae	Anania verbascalis	Golden Pearl	Nationally Scarce (Notable B)	not yet evaluated		h	wood sage	B	7
Lepidoptera	Crambidae	Calamotropha paludella	Bulrush Veneer	none	not yet evaluated		w	*Typha*	AB	7
Lepidoptera	Crambidae	Catoptria falsella	Chequered Grass-veneer	none	not yet evaluated		g	Poaceae	B	7
Lepidoptera	Crambidae	Catoptria pinella	Pearl Grass-veneer	none	not yet evaluated		g	Poaceae	B	7
Lepidoptera	Crambidae	Chilo phragmitella	Reed Veneer	none	not yet evaluated		w	*Phragmites*	AB	7
Lepidoptera	Crambidae	Chrysoteuchia culmella	Garden Grass-veneer	none	not yet evaluated		g	Poaceae	AB	7
Lepidoptera	Crambidae	Crambus pascuella	Inlaid Grass-veneer	none	not yet evaluated		g	Poaceae	B	7
Lepidoptera	Crambidae	Crambus perlella	Satin Grass-veneer	none	not yet evaluated		g	Poaceae	B	7
Lepidoptera	Crambidae	Elophila nymphaeata	Brown China-mark	none	not yet evaluated		w		B	7
Lepidoptera	Crambidae	Eudonia mercurella	Small Grey	none	not yet evaluated			mosses	B	7
Lepidoptera	Crambidae	Evergestis forficalis	Garden Pebble	none	not yet evaluated				A	7
Lepidoptera	Crambidae	Evergestis limbata	Dark Bordered Pearl	Nationally Scarce (Notable B)	not yet evaluated			garlic mustard, hedge mustard	A	7
Lepidoptera	Crambidae	Evergestis pallidata	Chequered Pearl	none	not yet evaluated			Brassicaceae	B	7
Lepidoptera	Crambidae	Ostrinia nubilalis	European Corn-borer	none	not yet evaluated		h	mugwort etc	AB	7
Lepidoptera	Crambidae	Pediasia contaminella	Waste Grass-veneer	Nationally Scarce (Notable B)	not yet evaluated		h	grasses including sheep's fescue	B	7
Lepidoptera	Crambidae	Pleuroptya ruralis	Mother of Pearl	none	not yet evaluated			stinging nettle	AB	7
Lepidoptera	Crambidae	Pyrausta aurata	Small Purple & Gold	none	not yet evaluated			mint and labiates	B	7
Lepidoptera	Crambidae	Scoparia pyralella	Meadow Grey	none	not yet evaluated			detritivore	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Crambidae	Scoparia ambigualis	Common Grey	none	not yet evaluated			mosses	B	7
Lepidoptera	Crambidae	Sitochroa verticalis	Lesser Pearl	none	not yet evaluated		h		B	7
Lepidoptera	Crambidae	Udea ferrugalis	Rusty Dot	none	not yet evaluated				B	7
Lepidoptera	Crambidae	Udea lutealis	Pale Straw Pearl	none	not yet evaluated				B	7
Lepidoptera	Crambidae	Udea prunalis	Dusky Pearl	none	not yet evaluated		s	various plants but especially blackthorn	B	7
Lepidoptera	Depressariidae – Flat-bodied Moths	Agonopterix heracliana	Common Flat-body	none	not yet evaluated		g	cow parsley and rough chervil	B	7
Lepidoptera	Drepanidae – Hooktip Moths	Cilix glaucata	Chinese Character	none	Least Concern		s	blackthorn, hawthorn, crab apple	AB	7
Lepidoptera	Drepanidae	Drepana falcataria	Pebble Hook-tip	none	Least Concern		s	downy and silver birch	A	7
Lepidoptera	Drepanidae	Falcaria lacertinaria	Scalloped Hook-tip	none	Least Concern		s	downy and silver birch	A	7
Lepidoptera	Drepanidae	Habrosyne pyritoides	Buff Arches	none	Least Concern		s	bramble and dewberry	AB	7
Lepidoptera	Drepanidae	Tethea ocularis	Figure of Eighty	none	Least Concern		s	aspen and poplars	A	7
Lepidoptera	Drepanidae	Watsonalla binaria	Oak Hook-tip	none	VULNERABLE		s	oak	B	7
Lepidoptera	Elachistidae – Grass Miner Moths	Elachista maculicerusella	Triple-spot Dwarf	none	not yet evaluated		w	Poaceae	B	7
Lepidoptera	Erebidae – Erebid Moths	Eilema complana	Scarce Footman	none	Least Concern			lichens	AB	7
Lepidoptera	Erebidae	Eilema depressa	Buff Footman	none	Least Concern			lichens	A	7
Lepidoptera	Erebidae	Eilema griseola	Dingy Footman	none	Least Concern			lichens	AB	7
Lepidoptera	Erebidae	Eilema lurideola	Common Footman	none	Least Concern			lichens	AB	7
Lepidoptera	Erebidae	Euproctis chrysorrhoea	Brown-tail	none	Least Concern				B	7
Lepidoptera	Erebidae	Euproctis similis	Yellow-tail	none	Least Concern				B	7
Lepidoptera	Erebidae	Herminia tarsipennalis	Fan-foot	none	Least Concern		s	oak, beech etc	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Erebidae	Hypena proboscidalis	Snout	none	Least Concern			stinging nettle	B	7
Lepidoptera	Erebidae	Laspeyria flexula	Beautiful Hook-tip	none	Least Concern			lichens	B	7
Lepidoptera	Erebidae	Leucoma salicis	White Satin	none	Least Concern		w	aspens, poplars	B	7
Lepidoptera	Erebidae	Lygephila pastinum	Blackneck	none	Near Threatened		w	tufted vetch	B	7
Lepidoptera	Erebidae	Lymantria monacha	Black Arches	none	Least Concern		s	oak	B	7
Lepidoptera	Erebidae	Macrochilo cribrumalis	Dotted Fan-foot	none	Least Concern		w	sedges and rushes	B	7
Lepidoptera	Erebidae	Miltochrista miniata	Rosy Footman	none	Least Concern			lichens	B	7
Lepidoptera	Erebidae	Pelosia obtusa	Small Dotted Footman	Nationally Rare	Near Threatened		w	?algaes on reeds	A	7
Lepidoptera	Erebidae	Phragmatobia fuliginosa	Ruby Tiger	none	Least Concern				B	7
Lepidoptera	Erebidae	Rivula sericealis	Straw Dot	none	Least Concern			Poaceae	B	67
Lepidoptera	Erebidae	Scoliopteryx libatrix	Herald	none	Least Concern		w	willow, aspens, poplars	B	7
Lepidoptera	Erebidae	Thumatha senex	Round-winged Muslin	none	Least Concern		w	lichens and mosses	AB	7
Lepidoptera	Erebidae	Tyria jacobaeae	Cinnabar	none	Least Concern			ragwort	B	7
Lepidoptera	Ethmiidae – Ethmiid Moths	Ethmia quadrillella	Comfrey Ermel	Nationally Scarce (Notable B)	not yet evaluated			comfrey, green alkanet	A	7
Lepidoptera	Gelechiidae – Gelechiid Moths	Anarsia spartiella	Small Crest	none	not yet evaluated		h	broom and gorse	B	7
Lepidoptera	Gelechiidae	Aroga velocella	Dusky Groundling	none	not yet evaluated		h	sheep’s sorrel	B	7
Lepidoptera	Gelechiidae	Bryotropha terrella	Cinerous Groundling	none	not yet evaluated		g	grasses and mosses	B	7
Lepidoptera	Gelechiidae	Helcystogramma rufescens	Orange Crest	none	not yet evaluated			grasses	AB	7
Lepidoptera	Gelechiidae	Oxypteryx wilkella	Painted Neb	Nationally Scarce (Notable B)	not yet evaluated		h	mosses	B	7
Lepidoptera	Gelechiidae	Teleiopsis diffinis	Large Groundling	none	not yet evaluated		h	sheep’s sorrel	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Geometridae – Geometrid Moths	Alcis repandata	Mottled Beauty	none	Least Concern				B	7
Lepidoptera	Geometridae	Biston betularia	Peppered Moth	none	Least Concern				B	7
Lepidoptera	Geometridae	Cabera exanthemata	Common Wave	none	Least Concern		w	willows and poplars	B	7
Lepidoptera	Geometridae	Camptogramma bilineata	Yellow Shell	none	Least Concern			Galium sp	A	7
Lepidoptera	Geometridae	Chiasmia clathrata	Latticed Heath	none	Near Threatened		g	Fabaceae	AB	67
Lepidoptera	Geometridae	Chloroclystis v-ata	V-Pug	none	Least Concern				AB	7
Lepidoptera	Geometridae	Crocallis elinguaria	Scalloped Oak	none	Least Concern		s	oak and other trees	AB	7
Lepidoptera	Geometridae	Ennomos alniaria	Canary-shouldered Thorn	none	Least Concern		s	birches, alder, limes, elms etc	AB	7
Lepidoptera	Geometridae	Epione repandaria	Bordered Beauty	none	Least Concern		w	sallows, poplars	A	7
Lepidoptera	Geometridae	Epirrhoe alternata	Common Carpet	none	Least Concern			Galium sp	A	7
Lepidoptera	Geometridae	Euchoeca nebulata	Dingy Shell	none	Least Concern		w	alder	A	7
Lepidoptera	Geometridae	Euphyia unangulata	Sharp-angled Carpet	none	Least Concern		s		B	7
Lepidoptera	Geometridae	Eupithecia absinthiata	Wormwood Pug	none	Least Concern		g	mugwort, yarrow	B	7
Lepidoptera	Geometridae	Eupithecia centaureata	Lime-speck Pug	none	Least Concern				B	7
Lepidoptera	Geometridae	Eupithecia pulchellata	Foxglove Pug	none	Least Concern			foxgloves	B	7
Lepidoptera	Geometridae	Gandaritis pyraliata	Barred Straw	none	Least Concern			Galiums	A	7
Lepidoptera	Geometridae	Geometra papilionaria	Large Emerald	none	Least Concern		s	birches, hazel, alder etc	B	7
Lepidoptera	Geometridae	Gymnoscelis rufifasciata	Double-striped Pug	none	Least Concern				B	7
Lepidoptera	Geometridae	Hydriomena furcata	July Highflyer	none	Least Concern		w	sallows, willows etc	AB	7
Lepidoptera	Geometridae	Idaea aversata	Riband Wave	none	Least Concern				AB	7
Lepidoptera	Geometridae	Idaea biselata	Small Fan-footed Wave	none	Least Concern				B	7
Lepidoptera	Geometridae	Idaea dimidiata	Single-dotted Wave	none	Least Concern				A	7

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Lepidoptera	Geometridae	Idaea fuscovenosa	Dwarf Cream Wave	none	Least Concern				B	7
Lepidoptera	Geometridae	Idaea rusticata	Least Carpet	none	Least Concern		s	ivy and traveller's joy	AB	7
Lepidoptera	Geometridae	Idaea trigeminata	Treble Brown Spot	none	Least Concern				AB	7
Lepidoptera	Geometridae	Jodis lactearia	Little Emerald	none	Least Concern		s	birches,hazels, blackthorn etc	B	7
Lepidoptera	Geometridae	Ligdia adustata	Scorched Carpet	none	Least Concern		s	spindle	B	7
Lepidoptera	Geometridae	Lobophora halterata	Seraphim	none	Least Concern		w	aspen, pooplars	B	7
Lepidoptera	Geometridae	Lomaspilis marginata	Clouded Border	none	Least Concern		w	aspen, poplars, willows	AB	7
Lepidoptera	Geometridae	Lomographa temerata	Clouded Silver	none	Least Concern		s	hawthorn, blackthorn, crab apple	AB	7
Lepidoptera	Geometridae	Macaria alternata	Sharp-angled Peacock	none	Least Concern		w	sallows, willows, alder	AB	7
Lepidoptera	Geometridae	Macaria liturata	Tawny-barred Angle	none	Least Concern		s	pines	B	7
Lepidoptera	Geometridae	Opisthograptis luteolata	Brimstone Moth	none	Least Concern		s	blackthorn, hawthorn, etc	AB	7
Lepidoptera	Geometridae	Ourapteryx sambucaria	Swallow-tailed Moth	none	Least Concern		s		AB	7
Lepidoptera	Geometridae	Pasiphila rectangulata	Green Pug	none	Least Concern		s	hawthorn, blackthorn, crab apple	B	7
Lepidoptera	Geometridae	Peribatodes rhomboidaria	Willow Beauty	none	Least Concern				B	7
Lepidoptera	Geometridae	Perizoma alchemillata	Small Rivulet	none	Least Concern		g	common hemp nettle	AB	7
Lepidoptera	Geometridae	Perizoma flavofasciata	Sandy Carpet	none	Least Concern			red campion	B	7
Lepidoptera	Geometridae	Philereme transversata	Dark Umber	none	Least Concern			Purging buckthorn	AB	7
Lepidoptera	Geometridae	Philereme vetulata	Brown Scallop	none	Least Concern			Purging buckthorn	AB	7
Lepidoptera	Geometridae	Pseudoterpna pruinata	Grass Emerald	none	Least Concern		h	gorse and broom	B	7
Lepidoptera	Geometridae	Pterapherapteryx sexalata	Small Seraphim	none	Least Concern		w	sallows	AB	7

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Lepidoptera	Geometridae	Scopula immutata	Lesser Cream Wave	none	Least Concern		g/w	meadowsweet, common valerian	B	7
Lepidoptera	Geometridae	Scopula imitaria	Small Blood-vein	none	Least Concern		s	privet, honeysuckle	B	7
Lepidoptera	Geometridae	Scotopteryx chenopodiata	Shaded Broad-bar	none	Least Concern		g	Fabaceae	AB	7
Lepidoptera	Geometridae	Selenia dentaria	Early Thorn	none	Least Concern				A	7
Lepidoptera	Geometridae	Selenia tetralunaria	Purple Thorn	none	Least Concern				A	7
Lepidoptera	Geometridae	Timandra comae	Blood-vein	none	Least Concern		g		A	7
Lepidoptera	Geometridae	Xanthorhoe fluctuata	Garden Carpet	none	Least Concern				A	7
Lepidoptera	Geometridae	Xanthorhoe quadrifasiata	Large Twin-spot Carpet	none	Least Concern		s		AB	7
Lepidoptera	Geometridae	Xanthorhoe spadicearia	Red Twin-spot Carpet	none	Least Concern				B	7
Lepidoptera	Gracillariidae – Leaf Blotch Miner Moths	Phyllonorycter corylifoliella	Hawthorn Midget	none	not yet evaluated				A	7
Lepidoptera	Hepialidae – Swift Moths	Hepialus humuli	Ghost Moth	none	Least Concern		w		B	7
Lepidoptera	Hesperiidae – Skipper Butterflies	Ochlodes sylvanus	Large Skipper	none	Least Concern				A	7
Lepidoptera	Hesperiidae	Thymelicus lineola	Essex Skipper	none	Least Concern				A	7
Lepidoptera	Lasiocampidae – Eggars etc	Euthrix potatoria	Drinker	none	Least Concern		w	grasses and reed	AB	7
Lepidoptera	Limacodidae – Cup Moths	Apoda limacodes	Festoon	none	Least Concern		s	oak	B	7
Lepidoptera	Lycaenidae – Blues etc	Lycaena phlaeas	Small Copper	none	Least Concern				AB	7,10
Lepidoptera	Lycaenidae	Polyommatus icarus	Common Blue	none	Least Concern				B	9
Lepidoptera	Momphidae – Momphid Moths	Mompha epilobiella	Common Mompha	none	not yet evaluated		w	willowherbs	A	7
Lepidoptera	Momphidae	Mompha ochraceella	Buff Mompha	none	not yet evaluated		w	willowherbs	B	7
Lepidoptera	Nepticulidae – Midget Moths	Stigmella plagicolella	Scrubland Pygmy	none	not yet evaluated		s	blackthorn	A	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Noctuidae – Noctuid Moths	Abrostola tripartita	Spectacle	none	Least Concern			stinging nettle	AB	7
Lepidoptera	Noctuidae	Acronicta rumicis	Knot Grass	none	Least Concern				A	7
Lepidoptera	Noctuidae	Agrotis clavis	Heart and Club	none	Least Concern				B	7
Lepidoptera	Noctuidae	Agrotis exclamationis	Heart and Dart	none	Least Concern				A	7
Lepidoptera	Noctuidae	Agrotis puta	Shuttle-shaped Dart	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Agrotis segetum	Turnip Moth	none	Least Concern				B	7
Lepidoptera	Noctuidae	Amphipoea oculea	Ear Moth	none	Least Concern			Poaceae	B	7
Lepidoptera	Noctuidae	Amphipyra pyramidea	Copper Underwing	none	Least Concern		s		B	7
Lepidoptera	Noctuidae	Anarta trifolii	Nutmeg	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Apamea lithoxylaea	Light Arches	none	Least Concern			Poaceae	B	7
Lepidoptera	Noctuidae	Apamea monoglypha	Dark Arches	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Apamea unanimis	Small Clouded Brindle	none	Least Concern			Poaceae	B	7
Lepidoptera	Noctuidae	Apterogenum ypsillon	Dingy Shears	none	Least Concern		w/s	willows, sallows, poplars	AB	7
Lepidoptera	Noctuidae	Arenostola phragmitidis	Fen Wainscot	none	Least Concern		w	*Phragmites*	AB	7
Lepidoptera	Noctuidae	Axylia putris	Flame	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Caradrina morpheus	Mottled Rustic	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Cerapteryx graminis	Antler Moth	none	Least Concern			Poaceae	B	7
Lepidoptera	Noctuidae	Colocasia coryli	Nut-tree Tussock	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Cosmia affinis	Lesser-spotted Pinion	none	Least Concern		s	elm	B	7
Lepidoptera	Noctuidae	Cosmia trapezina	Dun-bar	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Cryphia algae	Tree-lichen Beauty	none	NA (recent colonist)			lichens	A	7
Lepidoptera	Noctuidae	Deltote pygarga	Marbled White Spot	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Diachrysia chrysitis	Burnished Brass	none	Least Concern				AB	7

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Lepidoptera	Noctuidae	Dypterygi scabriuscula	Bird's Wing	none	Least Concern			Polygonaceae	A	7
Lepidoptera	Noctuidae	Eremobia ochroleuca	Dusky Sallow	none	Least Concern			Poaceae	B	7
Lepidoptera	Noctuidae	Euplexia lucipara	Small Angle Shades	none	Least Concern				A	7
Lepidoptera	Noctuidae	Euxoa tritici	White-line Dart	none	VULNERABLE		h		AB	7
Lepidoptera	Noctuidae	Hoplodrina octogenaria	Uncertain	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Ipimorpha subtusa	Olive	none	Least Concern		w	aspens and poplars	B	7
Lepidoptera	Noctuidae	Lacanobia oleracea	Bright-line Brown-eye	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Lateroligia ophiogramma	Double Lobed	none	Least Concern		w	Poaceae	B	7
Lepidoptera	Noctuidae	Leucania comma	Shoulder-striped Wainscot	none	Least Concern			Poaceae	A	7
Lepidoptera	Noctuidae	Melanchra persicariae	Dot Moth	none	Least Concern				B	7
Lepidoptera	Noctuidae	Mythimna conigera	Brown-line Bright Eye	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Mythimna ferrago	Clay	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Mythimna impura	Smoky Wainscot	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Noctua janthe	Lesser Broad-bordered Yellow Underwing	none	Least Concern				B	7
Lepidoptera	Noctuidae	Noctua comes	Lesser Yellow Underwing	none	Least Concern				B	7
Lepidoptera	Noctuidae	Noctua fimbriata	Broad-bordered Yellow Underwing	none	Least Concern				B	7
Lepidoptera	Noctuidae	Noctua pronuba	Large Yellow Underwing	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Ochropleura plecta	Flame Shoulder	none	Least Concern				AB	7
Lepidoptera	Noctuidae	Oligia fasciuncula	Middle-barred Minor	none	Least Concern			Poaceae	AB	7
Lepidoptera	Noctuidae	Parastichtis suspecta	Suspected	none	Least Concern		s	birches and sallows	A	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Noctuidae	Photedes fluxa	Mere Wainscot	none	Least Concern		h	wood small-reed	B	7
Lepidoptera	Noctuidae	Subacronicta megacephala	Poplar Grey	none	Least Concern		w/s	poplars and willows, aspen	AB	7
Lepidoptera	Noctuidae	Xestia c-nigrum	Setaceous Hebrew Character	none	Least Concern				B	7
Lepidoptera	Noctuidae	Xestia triangulum	Double Square-spot	none	Least Concern				AB	7
Lepidoptera	Nolidae – Tufted Moths	Earias clorana	Cream-bordered Green Pea	none	Least Concern		w	sallows, willows etc	A	7
Lepidoptera	Nolidae	Meganola albula	Kent Black Arches	none	Least Concern			brambles etc – Rubus etc	B	7
Lepidoptera	Nolidae	Nola cucullatella	Short-cloaked Moth	none	Least Concern		s	hawthorn, blackthorn, apple etc	B	7
Lepidoptera	Nolidae	Nycteola revayana	Oak Nycteoline	none	Least Concern		s	oak	B	7
Lepidoptera	Nolidae	Pseudoips prasinana	Green Silver-lines	none	Least Concern				B	7
Lepidoptera	Notodontidae – Prominents	Notodonta dromedarius	Iron Prominent	none	Least Concern		s	birch and alder	B	7
Lepidoptera	Notodontidae	Phalera bucephala	Buff-tip	none	Least Concern				AB	7
Lepidoptera	Notodontidae	Pterostoma palpina	Pale Prominent	none	Least Concern		w/s	aspen, poplars and willows	AB	7
Lepidoptera	Notodontidae	Ptilodon capucina	Coxcomb Prominent	none	Least Concern				B	7
Lepidoptera	Notodontidae	Stauropus fagi	Lobster Moth	none	Least Concern		s	oak, birches, alder, beech	B	7
Lepidoptera	Nymphalidae – Brush-footed Butterflies	Aglais io	Peacock	none	Least Concern			stinging nettle	AB	467
Lepidoptera	Nymphalidae	Aglais urticae	Small Tortoiseshell	none	Least Concern			nettles	AB	469
Lepidoptera	Nymphalidae	Aphantopus hyperantus	Ringlet	none	Least Concern			Poaceae	AB	7
Lepidoptera	Nymphalidae	Coenonympha pamphilus	Small Heath	s.41 NERC	VULNERABLE		g	Poaceae	B	9
Lepidoptera	Nymphalidae	Maniola jurtina	Meadow Brown	none	Least Concern		g	Poaceae	AB	67
Lepidoptera	Nymphalidae	Pararge aegeria	Speckled Wood	none	Least Concern		s	Poaceae	A	679

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Lepidoptera	Nymphalidae	Polygonia c-album	Comma	none	Least Concern			hop, stinging nettle	AB	479
Lepidoptera	Nymphalidae	Pyronia tithonus	Gatekeeper	none	Least Concern			Poaceae	A	7
Lepidoptera	Nymphalidae	Vanessa atalanta	Red Admiral	none	Least Concern			nettles	AB	69
Lepidoptera	Nymphalidae	Vanessa cardui	Painted Lady	none	Least Concern				B	7
Lepidoptera	Oecophoridae – Concealer Moths	Batia lunaris	Lesser Tawny Tubic	none	not yet evaluated			lichens	B	7
Lepidoptera	Oecophoridae	Crassa unitella	Golden-brown Tubic	none	not yet evaluated			fungus	AB	7
Lepidoptera	Oecophoridae	Esperia sulphurella	Sulphur Tubic	none	not yet evaluated		s		A	4
Lepidoptera	Oecophoridae	Hofmannophila pseudospretella	Brown House-moth	none	not yet evaluated			detritivore	B	7
Lepidoptera	Oecophoridae	Metalampra italica		none	not yet evaluated		s	oaks	B	7
Lepidoptera	Parametriotidae – Parametriotid Moths	Blastodacna hellerella	Hawthorn Cosmet	none	not yet evaluated		s	hawthorn	B	7
Lepidoptera	Peleopodidae – Peleopodid Moths	Carcina quercana	Long-horned Flat-body	none	not yet evaluated		s	oak	B	7
Lepidoptera	Pieridae – White Butterflies	Anthocharis cardamines	Orange-tip	none	Least Concern		g/w	cuckoo flower, garlic mustard etc	AB	4
Lepidoptera	Pieridae	Gonepteryx rhamni	Brimstone	none	Least Concern		s	alder buckthorn, buckthorn	A	46
Lepidoptera	Pieridae	Pieris brassicae	Large White	none	Least Concern			Brassicaceae	B	79
Lepidoptera	Pieridae	Pieris napi	Green-veined White	none	Least Concern			Cruciferae	AB	4679,10
Lepidoptera	Pieridae	Pieris rapae	Small White	none	Least Concern			Cruciferae	AB	69
Lepidoptera	Plutellidae – Plutellid Moths	Plutella xylostella	Diamond-back Moth	none	not yet evaluated				B	7
Lepidoptera	Pterophoridae – Plume Moths	Adaina microdactyla	Hemp-agrimony Plume	none	not yet evaluated		g/w	Hemp-agrimony	B	7
Lepidoptera	Pterophoridae	Pterophorus pentadactyla	White Plume Moth	none	not yet evaluated			bindweeds	B	7
Lepidoptera	Pyralidae – Pyralid Moths	Acrobasis advenella	Grey Knot-horn	none	not yet evaluated		s	hawthorn, rowan	B	7
Lepidoptera	Pyralidae	Acrobasis repandana	Warted Knot-horn	none	not yet evaluated		s	oak	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Pyralidae	Aphomia sociella	Bee Moth	none	not yet evaluated			subterranean bee and wasp nests	B	7
Lepidoptera	Pyralidae	Endotricha flammealis	Rosy Tabby	none	not yet evaluated		w	greater bird's-trefoil	AB	7
Lepidoptera	Pyralidae	Euzophera pinguis	Ash-bark Knot-horn	none	not yet evaluated		s	ash	A	7
Lepidoptera	Pyralidae	Hypsopygia costalis	Gold Triangle	none	not yet evaluated			detritus, decaying organic vegetative material	AB	7
Lepidoptera	Pyralidae	Hypsopygia glaucinalis	Double-striped Tabby	none	not yet evaluated				A	7
Lepidoptera	Pyralidae	Pempelia genistella	Gorse Knot-horn	Nationally Scarce (Notable A)	not yet evaluated		h	gorse	B	7
Lepidoptera	Pyralidae	Phycita roborella	Dotted Oak Knot-horn	none	not yet evaluated		s	oak	AB	7
Lepidoptera	Sphingidae – Hawk-moths	Deilephila elpenor	Elephant Hawk-moth	none	Least Concern			bogbean, willowherbs, fuchsias etc	B	7
Lepidoptera	Sphingidae	Deilephila porcellus	Small Elephant Hawk-moth	none	Least Concern			galliums	B	7
Lepidoptera	Sphingidae	Laothoe populi	Poplar Hawk-moth	none	Least Concern		s		AB	7
Lepidoptera	Sphingidae	Sphinx pinastri	Pine Hawk-moth	none	Least Concern		s	pines	B	7
Lepidoptera	Tineidae – Tineid Moths	Tinea trinotella	Bird's-nest Moth	none	not yet evaluated			organic detritus	B	7
Lepidoptera	Tortricidae – Tortrix Moths	Acleris forsskaleana	Maple Button	none	Least Concern		s	Acer sp	B	7
Lepidoptera	Tortricidae	Acleris holmiana	White-triangle Button	none	Least Concern		s	rose, hawthorn, apple etc	B	7
Lepidoptera	Tortricidae	Aethes cnicana	Thistle Conch	none	Least Concern		g	thistles	B	7
Lepidoptera	Tortricidae	Agapeta hamana	Common Yellow Conch	none	Least Concern		g	thistles	AB	7
Lepidoptera	Tortricidae	Agapeta zoegana	Knapweed Conch	none	not yet evaluated		g	knapweeds	B	7
Lepidoptera	Tortricidae	Ancylis achatana	Triangle-marked	none	Least Concern		s	hawthorn,	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
			Roller					blackthorn etc		
Lepidoptera	Tortricidae	Archips podana	Large Fruit-tree Tortrix	none	Least Concern		s		A	7
Lepidoptera	Tortricidae	Celypha lacunana	Common Marble	none	Least Concern				AB	7
Lepidoptera	Tortricidae	Celypha striana	Barred Marble	none	Least Concern			dandelions	AB	7
Lepidoptera	Tortricidae	Cochylochroa atricapitana	Black-headed Conch	none	not yet evaluated			ragwort	B	7
Lepidoptera	Tortricidae	Neocochylis dubitana	Little Conch	none	Least Concern		g	Asteraceae	B	7
Lepidoptera	Tortricidae	Neocochylis molliculana	Ox-tongue Conch	none	Least Concern		g	bristly ox-tongue	B	7
Lepidoptera	Tortricidae	Cydia splendana	Marbled Piercer	none	Least Concern		s	oak, sweet chestnut	B	7
Lepidoptera	Tortricidae	Epiblema foenella	White-foot Bell	none	Least Concern		g	mugwort	AB	7
Lepidoptera	Tortricidae	Epiphyas postvittana	Light Brown Apple Moth	none	not yet evaluated				B	7
Lepidoptera	Tortricidae	Eucosma campoliliana	Marbled Bell	none	Least Concern		h	ragwort	B	7
Lepidoptera	Tortricidae	Eucosma cana	Hoary Belle	none	Least Concern		g	thistle, black knapweed	AB	7
Lepidoptera	Tortricidae	Eucosma hohenwartiana	Bright Bell	none	Least Concern		g	knapweeds	B	7
Lepidoptera	Tortricidae	Eudemis profundana	Diamond-back Marble	none	Least Concern		s	oak	B	7
Lepidoptera	Tortricidae	Eupoecilia angustana	Marbled Conch	none	not yet evaluated				B	7
Lepidoptera	Tortricidae	Gypsonoma dealbana	Common Cloaked Shoot	none	Least Concern		s		B	7
Lepidoptera	Tortricidae	Hedya nubiferana	Marbled Orchard Tortrix	none	Least Concern		s		B	7
Lepidoptera	Tortricidae	Hedya salicella	White-backed Marble	none	Least Concern		w	willows and poplars	AB	7
Lepidoptera	Tortricidae	Notocelia trimaculana	Triple-blotched Bell	none	Least Concern		s	hawthorn	B	7
Lepidoptera	Tortricidae	Notocelia uddmanniana	Bramble Shoot Moth	none	not yet evaluated			bramble	B	7
Lepidoptera	Tortricidae	Pammene fasciana	Acorn Piercer	none	Least Concern		s	oak, sweet chestnut	B	7

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Lepidoptera	Tortricidae	Pandemis cerasana	Barred Fruit-tree Tortrix	none	Least Concern				B	7
Lepidoptera	Tortricidae	Pandemis heparana	Dark Fruit-tree Tortix	none	Least Concern		s		B	7
Lepidoptera	Tortricidae	Phtheochroa inopiana	Plain Conch	none	Least Concern		w/g	common fleabane	AB	7
Lepidoptera	Tortricidae	Piniphila bifasciana	Pine Marble	none	not yet evaluated		s	pines	B	7
Lepidoptera	Tortricidae	Pseudargyrotoza conwagana	Yellow-spot Twist	none	Least Concern		s	ash, privet	B	7
Lepidoptera	Tortricidae	Spilonota ocellana	Bud Moth	none	Least Concern		s		B	7
Lepidoptera	Tortricidae	Zeiraphera isertana	Cock's-head Bell	none	Least Concern		s	oak	B	7
Lepidoptera	Yponomeutidae – Ermine Moths	Paraswammerdamia nebulella	Hawthorn Ermel	none	Least Concern		s	hawthorn,rose etc	AB	7
Lepidoptera	Yponomeutidae	Yponomeuta evonymella	Bird-cherry Ermine	none	not yet evaluated		s	cherry, cherry plum etc	AB	7
Lepidoptera	Yponomeutidae	Yponomeuta rorrella	Willow Ermine	none	not yet evaluated		w	willows, sallows	B	7
Lepidoptera	Ypsolophidae – Ypsolophid Moths	Ypsolopha scabrella	Wainscot Smudge	none	not yet evaluated		s	hawthorn and apple	B	7
Lithobiomorpha – CENTIPEDES	Lithobiidae – Centipedes (part)	Lithobius forficatus	Brown Centipede	none	Least Concern				B	7
Lithobiomorpha	Lithobiidae	Lithobius microps	Stone Centipede	none	Least Concern				B	56
Mecoptera – SCORPIONFLIES	Panorpidae – Scorpionflies	Panorpa communis		none	not yet evaluated				AB	67
Megaloptera – ALDERFLIES	Sialidae – Alderflies	Sialis lutaria		none	not yet evaluated		w/a		A	46
Neotaenioglossa – SNAILS (part)	Bithyniidae – Bithyniid Snails	Bithynia tentaculata	Common Bithynia	none			w/a		A(D2)	6
Neuroptera – LACEWINGS	Chrysopidae – Green Lacewings	*Chrysoperla carnea agg.*							B	10
Neuroptera	Hemerobiidae – Brown Lacewings	Hemerobius humulinus		none	not yet evaluated				AB	4
Neuroptera	Hemerobiidae	Hemerobius lutescens		none	not yet evaluated				A	4
Neuroptera	Hemerobiidae	Psectra diptera		none	not yet evaluated				A	6

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Odonata – DRAGONFLIES and DAMSELFLIES	Aeshnidae – Hawkers	Aeshna mixta	Migrant Hawker	none	Least Concern		w/a		A	9
Odonata	Calopterygidae – Demoiselle Damselflies	Calopteryx splendens	Banded Demoiselle	none	Least Concern		w/a		A	6
Odonata	Coenagrionidae – Red and Blue Damselflies	Coenagrion puella	Azure Damselfly	none	Least Concern		w/a		AB	6
Odonata	Coenagrionidae	Enallagma cyathigerum	Common Blue Damselfly	none	Least Concern		w/a		B(P1)	4
Odonata	Coenagrionidae	Pyrrhosoma nymphula	Large Red Damselfly	none	Least Concern		w/a		A(D1) B(P1)	46
Odonata	Libellulidae – Darters and Chasers	Sympetrum sanguineum	Ruddy Darter	none	Least Concern		w/a		A	9
Odonata	Libellulidae	Sympetrum striolatum	Common Darter	none	Least Concern		w/a		B	9,10
Opiliones	Nemastomatidae – Harvestmen (part)	Nemastoma bimaculatum		none	not yet evaluated				B	11
Opiliones	Phalangiidae – Harvestmen (part)	Leiobunum rotundum		none	not yet evaluated				AB	9
Opiliones	Phalangiidae	Oligolophus tridens		none	not yet evaluated				A	11
Opiliones	Phalangiidae	Opilio parietinus		none	not yet evaluated				B	7
Opiliones	Phalangiidae	Paroligolophus agrestis		none	not yet evaluated				A	9
Opiliones	Phalangiidae	Phalangium opilio		none	not yet evaluated				B	7
Opiliones	Phalangiidae	Platybunus triangularis		none	not yet evaluated				A	6
Orthoptera – GRASSHOPPERS, GROUNDHOPPERS and BUSH-CRICKETS	Acrididae – Grasshoppers	Chorthippus albomarginatus	Lesser Marsh Grasshopper	none	Least Concern		g		A	7
Orthoptera	Acrididae	Chorthippus brunneus	Common Field Grasshopper	none	Least Concern		g/h		B	79
Orthoptera	Acrididae	Chorthippus parallelus	Meadow Grasshopper	none	Least Concern		g		AB	79
Orthoptera	Acrididae	Myrmeleotettix maculatus	Mottled Grasshopper	none	Least Concern		h		B	67

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
Orthoptera	Conocephalidae – Coneheads	Conocephalus dorsalis	Short-winged Conehead	none	Least Concern		g		A	79
Orthoptera	Conocephalidae	Conocephalus fuscus	Long-winged Cone-head	none	Least Concern		g		AB	79,10
Orthoptera	Meconematidae – Oak Bush-crickets	Meconema thalassinum	Oak Bush Cricket	none	Least Concern		s		A	7
Orthoptera	Phaneropteridae – Bush-crickets (part)	Leptophyes punctatissima	Speckled Bush-cricket	none	Least Concern				AB	679
Orthoptera	Tetrigidae – Groundhoppers	Tetrix subulata	Slender Ground-hopper	none	Least Concern		g/w		AB	45679
Orthoptera	Tetrigidae	Tetrix undulata	Common Ground-hopper	none	Least Concern		g/w		A	9
Orthoptera	Tettigoniidae – Bush-crickets (part)	Pholidoptera griseoaptera	Dark Bush Cricket	none	Least Concern				AB	467,10
Orthoptera	Tettigoniidae	Roeseliana roeselii	Roesel's Bush-cricket	none	Least Concern		g		AB	69
Plecoptera – STONEFLIES	Nemouridae – Nemourid Stoneflies	Nemoura cinerea		none	Least Concern		a/w		A	4
Plecoptera	Nemouridae	Nemoura dubitans		Nationally Rare	Least Concern		a/w		AB	4
Plecoptera	Nemouridae	*Nemouridae larva*							A(D1)	4
Plecoptera	Nemouridae	Nemurella pictetii		none	Least Concern		a/w		B	4
Polydesmida – FLAT-BACKED MILLIPEDES	Polydesmidae – Flat-backed Millipedes	Polydesmus angustus	Common Flat-backed Millipede	none	Least Concern				A	6
Psocoptera – BARKLICE	Caeciliusidae – Barklice (part)	Valenzuela atricornis		?	not yet evaluated				A	7
Psocoptera	Philotarsidae – Barklice (part)	Philotarsus picicornis		none	not yet evaluated		s		A	7
Psylloidea – JUMPING PLANTLICE	Psyllidae – Jumping Plant Lice	Psylla alni		none	not yet evaluated		s	alder	A	67
Pulmonata – TERRESTRIAL GASTROPODS	Cochlicopidae – Pillar Snails	Cochlicopa lubrica	Slippery Moss Snail	none					B	4
Pulmonata	Gastrodontidae –	Zonitoides nitidus	Shiny Glass Snail	none					B	5

Order	Family	Taxon	Vernacular	Status	IUCN Status	Voucher Retained?	Habitat Code	Association	Site	Months
	Gloss Snails									
Pulmonata	Helicidae – Helicid Snails	Cepaea hortensis	White-lipped Snail	none					A	7
Pulmonata	Helicidae	Cepaea nemoralis	Brown-lipped Snail	none					A	469
Pulmonata	Helicidae	Cornu aspersum	Common Garden Snail	none					A	679
Pulmonata	Hygromiidae – Leaf Snails	Monacha cantiana	Kentish Snail	none					A	46
Hygrophila – FRESHWATER GASTROPODS	Lymnaeidae – Pond Snails	Galba truncatula	Dwarf Pond Snail	none			a/w		A	9
Hygrophila	Lymnaeidae	*Stagnicola fuscus/palustris*	*Marsh Pond Snail*				a/w		A(D2)	49
Hygrophila	Lymnaeidae	Lymnaea stagnalis	Great Pond Snail	none			a		A(D1, D2)	46
Hygrophila	Lymnaeidae	Ampullaceana balthica	Wandering Pond Snail	none			a/w		A(D2) B(P1,P2)	49
Hygrophila	Physidae – Bladder Snails	Aplexa hypnorum	Moss Bladder Snail	none			w		A(I)	4
Hygrophila	Planorbidae – Ramshorn Snails	Anisus vortex	Whirlpool Ram's-horn	none			a		A(D1, D2)	4
Hygrophila	Planorbidae	Planorbarius corneus	Great Ram's-horn	none			a		A(D2)	4
Hygrophila	Planorbidae	Planorbis planorbis	Margined Ram's-horn	none			a		A(D1)	4
Pulmonata	Succineidae – Amber Snails	Oxyloma elegans	Pfeiffer's Amber Snail	none			w		B(ditch)	45
Pulmonata	Valloniidae – Valloniid Snails	Vallonia pulchella	Smooth Grass Snail	none					A	4
Pulmonata	Vertiginidae – Whorl Snails	Vertigo pygmaea	Common Whorl Snail	none					AB	6,11
Sternorrhyncha – APHIDS	Aphididae – Aphids	Tuberolachnus salignus	Large Grey Willow Aphid	none	not yet evaluated		s		B	10
Trichoptera – CADDISFLIES	Leptoceridae – Caddisflies (part)	Leptocerus tineiformis		none	Least Concern		w/a		B	7

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Trichoptera	Leptoceridae	Mystacides longicornis	Grouse Wing	none	Least Concern		w/a		B	7
Trichoptera	Leptoceridae	Oecetis ochracea		none	Least Concern		w/a		B	7
Trichoptera	Limnephilidae – Caddisflies (part)	Glyphotaelius pellucidus		none	Least Concern		w/a		A	6
Trichoptera	Limnephilidae	Limnephilus auricula		none	Least Concern		w/a		A	4
Trichoptera	Limnephilidae	Limnephilus incisus		none	Least Concern		w/a		B	6
Trichoptera	*unknown*	*Trichoptera larva (cased)*					a		A(D1, D2)B(P1,P2)	4
Tricladida – FLATWORMS	*unknown*	*Triclada sp*					a		B(P2)	4
Trombidiformes – MITES	Tetranychidae – Tetranychid Mites	Tetranychus lintearius	Gorse Spider Mite	none			h	gorse	B	4